TRADE OPENNESS AND ECONOMIC GROWTH: EXPERIENCE FROM THREE SACU COUNTRIES

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DECLARATION

Student number: 46291105

I declare that “TRADE OPENNESS AND ECONOMIC GROWTH: EXPERIENCE FROM THREE SACU COUNTRIES” is my own work and that all sources that I have used or quoted from have been indicated and acknowledged by means of complete references.

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ABSTRACT

This study uses annual data for the period 1975-2014 for South Africa and Botswana, and 1979-2013 for Lesotho to examine empirically the impact of trade openness on economic growth in these three South African Customs Union (SACU) countries. The motivation for this study is that SACU countries are governed by the common agreement for the union that oversees the movement of goods that enter the SACU area. However, although these countries are in a common union, they have quite different levels of development. Based on the country's level of development, Lesotho is a lower middle-income and least developed country, whereas Botswana and South Africa are upper middle-income economies. Thus, these disparities in the levels of economic development of SACU countries i are expected to have different implications in relation to the extent to which trade openness affects economic growth. It is within this background that the current study seeks to examine what impact trade openness has on economic growth in each of the three selected countries. To check the robustness of the empirical results, this study uses four equations based on four different indicators of trade openness to examine the linkage between trade openness and economic growth. While Equation 1, Equation 2 and Equation 3 employ trade-based indicators of openness, Equation 4 uses a modified version of the UNCTAD (2012a) trade openness index that incorporates differences in country size and geography. Using the autoregressive distributed lag (ARDL) bounds testing approach to cointegration and error-correction modelling, the study found that the impact of trade openness on economic growth varies across the three SACU countries. Based on the results for the first three equations, the study found that trade openness has a positive impact on economic growth in South Africa and Botswana, whereas it has no significant impact on economic growth in Lesotho. Based on Equation 4 results, the study found that after taking the differences in country size and geography into account, trade openness has a positive impact on economic growth in Botswana, but an insignificant impact in South Africa and Lesotho. For South Africa and Botswana, the main recommendation from this study is that policy makers should pursue policies that promote total trade to increase economic growth in both the short and the long run. For Lesotho, the study recommends, among other things, the adoption of policies aimed at enhancing human capital and infrastructural development as well as the broadening of exports, so as to enable the economy to grow to a threshold level necessary for the realisation of significant gains from trade.

KEY WORDS

Trade openness**,** export-led growth, export promotion, import substitution, ARDL bounds testing approach, cointegration, error-correction modelling, Southern African Customs Union, South Africa, Lesotho, Botswana

DEDICATION

To my parents Gerard and Francisca Malefane, with sincere love and appreciation.

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Malefane, M.R. and Odhiambo, N.M. 2016. 'The evolution of trade policy in Botswana', *Global Journal of Emerging Market Economies*, 8(1): 22-34.

Malefane, M.R. and Odhiambo, N.M. 2016. 'The role of international trade in Lesotho', *Acta Universitatis Danubius Œconomica*, 12(5): 211-226.

Malefane M R and Odhiambo, N.M. 2017. 'The dynamics of trade openness in South Africa: an exploratory review', *International Journal for Quality Research*, 11(4): 887-902.

Malefane, M.R. and Odhiambo, N.M. 2018. 'Impact of trade openness on economic growth: empirical evidence from South Africa', *Economia Internazionale / International Economics*, 71(4): 387 – 416.

Malefane, M.R. and Odhiambo, N.M. 2019. 'Trade openness on economic growth: empirical evidence from Lesotho', *Global Business Review*, https://doi.org/10.1177/0972150919830812

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ACRONYMS

ACP	Africa, Caribbean and Pacific
AGOA	Africa Growth and Opportunity Act
AIC	Akaike information criterion
ARDL	auto-regressive distributed lag
BRICS	Brazil, Russia, India, China and South Africa
CFTA	Continental Free Trade Area
CREFSA	Centre for Research into Economics and Finance in Southern Africa
Cusum	cumulative sum of recursive residuals
CusumQ	cumulative sum of squares of recursive residuals
DTI	Department of Trade and Industry
DTIS	diagnostic trade integration study
EAC	East African Community
EBA	everything but arms
ECM	error correction mechanism
EFTA	European Free Trade Association
EIF	enhances integrated framework
EIU	Economics Intelligence Unit
EPA	Economic Partnership Agreement
EU	European Union
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product

GEAR	Growth, Employment and Redistribution programme
GEIS	General Export Incentives Scheme
GLS	generalised least squares
GSP	Generalised System of Preferences
IMF	International Monetary Fund
LDC	least developed country
LNDC	Lesotho National Development Corporation
MFN	most favoured nation
NDP	National Development Plan
OECD	Organisation for Economic Cooperation and Development
OLS	ordinary least squares
PP	Phillips-Perron
PRS	Poverty Reduction Strategy
RSA	Republic of South Africa
SACU	South African Customs Union
SADC	Southern African Development Community
SBC	Schwartz-Bayesian criterion
TIDCA	Trade, Investment and Development Cooperation Agreement
TDCA	Trade, Development and Cooperation Agreement
TRP	Tariff Rationalisation Process
UNCTAD	United Nations Conference on Trade and Development
US	United States of America

USAID	United States Agency for International Aid and Development
VAT	value-added tax
WTO	World Trade Organisation

CHAPTER 1

INTRODUCTION

1.1 Background

The impact of trade openness and economic growth has led to a growing debate in various empirical studies. Part of this growing debate on the role of trade openness and economic growth is driven by concern about the role of international trade in economic growth. Theoretical literature, particularly the new theories of growth, provides a framework in support of the proposition that trade openness has a positive impact on economic growth (for example see Romer 1990; Grossman and Helpman, 1991; Lucas, 1988; and Romer, 1986). However, evidence from studies investigating the impact of trade openness on economic growth in developing countries is mixed. In studies like those of Babatunde (2011) and Renelt (1992), it was found that that the impact of trade openness on economic growth is insignificant.

While some studies, like those of Vogiatzoglou and Nguyen (2016), Brückner and Lederman (2012), Rao and Rao (2009), Wacziarg and Welch (2008), Kamrul Hassan (2005), Karras (2003), and Edwards (1992), found that trade openness has a positive impact on economic growth, not all studies support this finding. There are other studies that have found that trade openness has a negative impact on economic growth (Adhikary, 2011; Rodrik, 1998; Krugman, 1994; Young, 1991).

In the quest to open their countries to international trade, some countries have resolved to find ways to restructure economic policies and national strategies. As part of their broader macroeconomic policy restructuring, some countries – particularly developing countries – have adopted and implemented that aimed at fostering a better environment in which international trade could take place. In some of these countries, the move towards more open trade has been one of the specific focal points in their policy-making process. In some sub-Saharan African countries for instance; the move towards trade openness has been implemented in the form of the removal of trade restrictions, while other countries have introduced export-promoting strategies (see Edwards, 2006; Bell, 1992; and Bell, 1997).

In South Africa, as part of economic structuring, the country has adopted a more trade liberalising strategy, which has resulted in significant reductions in the simple average tariff rates (Edwards, 2006). Like South Africa, Lesotho and Botswana have been caused to apply measures that open their economies to trade with the rest of the world. In Lesotho, trade and growth policy reforms were to some extent influenced by its national development plans and growth strategy. Starting

from the late 1980s, Lesotho implemented several major trade-reforming interventions, during which some of the practices affecting exports and import flows were reviewed from time to time. Key elements of Lesotho's trade reforms include the removal of quantitative restrictions, the elimination of import duties, and the elimination of non-tariff barriers (World Trade Organisation, 2003).

In Botswana, the focus of the country's trade policy has been on trade liberalisation and investment promotion. The country has put in place measures to facilitate more open trade as a response to the WTO notification. These measures include the adoption of some trade liberalising strategies that cover agreements on agriculture, tariffs and trade, and technical barriers to trade (World Trade Organisation, 2009). Botswana largely uses tariff-based measures as key policy instruments in execution of its trade policy. However, since the country is a signatory to a number of regional and multilateral trade arrangements, the tariff structure in Botswana varies accordingly. In turn, the country's exports also receive preferential treatment from the trade agreements Botswana has entered.

Given these continued efforts by South Africa, Lesotho and Botswana to enhance their trade openness, it is still questionable as to how these countries' economic growth has benefited from openness to trade. The current study attempts to investigate whether opening an economy to trade does indeed increase economic growth in the three selected South African Customs Union (SACU) countries. The South African Customs Union now operates under the 2002 SACU Agreement, which among other things, seeks to promote the integration of member states into the global economy through enhanced trade and investment. Thus, SACU member countries have harmonised their customs regimes, tariffs, other border taxes, and trade remedies (SACU, 2016).

In line with the objectives of the union, the SACU mandate is centered on how member countries can facilitate trade. Accordingly, trade facilitation is a key component of the SACU mandate, which among other things, targets the removal of non-tariff barriers. To enforce the trade facilitation programme, the union has established the main components of a trade facilitation programme. The main components of this programme include: customs policy development, customs legislation, standard operating procedure, IT connectivity, risk management and trade partnerships (SACU, 2011). These components are in accord with the objective of integrating SACU into international markets through trade negotiations as indicated in the 2002 SACU

agreement. Thus, the fostering of trade partnerships has received much attention in the SACU lately.

Although the relationship between trade openness and economic growth has been a subject of interest in many empirical investigations, much coverage in this subject has been in countries outside sub-Saharan Africa. Moreover, while there is no unanimous consensus on the impact of trade openness on economic growth, the fact that this issue remains under-researched in SACU – a union which was formed with the goal of applying policies that facilitate trade in the member countries – has spurred interest in the current study. This study investigates three SACU countries: South Africa, Lesotho and Botswana. Drawing from the main objective of the study, which is to investigate the impact of trade openness on economic growth in the selected SACU countries, the main contribution of the study envisaged is in creating an understanding of how SACU countries have benefited from opening up their economies to international trade. By analysing the existing data for the selected countries, this study envisages arriving at certain conclusions regarding the extent to which trade openness has influenced economic growth in SACU.

1.2 Objectives and hypotheses of the study

1.2.1 Objectives of the study

The main objectives of this study are to:

(a) examine the dynamics of trade openness and economic growth in South Africa, Lesotho and Botswana;

(b) examine empirically whether the impact of trade openness on economic growth is based on a proxy used to measure the degree of trade openness;

(c) test empirically the significance of openness index (based on country size and geography) on economic growth in the selected SACU countries;

(d) examine the key policy implications and provide policy recommendations, in both the short and long run, based on the relevant results from the three SACU countries.

1.2.2 Hypotheses of the study

These hypotheses are tested in this study:

(i) Trade openness – measured by total trade to GDP, exports to GDP, and imports to GDP – has a positive impact on economic growth in the short run.

(ii) Trade openness – measured by total trade to GDP, exports to GDP, and imports to GDP – has a positive impact on economic growth in the long run.

(iii) The trade openness index, based on country size and geography, has a positive impact on economic growth.

(iv) The impact of trade openness on economic growth depends on the proxy used and the country under study.

1.3 Significance of the study

This study will help in determining the extent to which trade openness affects economic growth in the SACU countries. The findings from the empirical analysis of this study indicate the magnitude of both the short- and long-run impact of trade openness on economic growth. In addition to that, this study reviews the trade and growth policies of the selected SACU countries, which helps in establishing how developments in policy relate to economic growth in the countries under study. In conjunction with this, the study further discusses the experiences of these countries during their implementation of trade-opening initiatives.

This study differs from previous studies in various ways. Most previous studies investigating the relationship between trade openness and economic growth are based in Asia and Latin America. Moreover, some of the previous studies used cross-sectional data analysis, whereas this study uses time series analysis for each of the selected countries. Time series analysis allows one to investigate how the impact of trade openness on economic growth varies across the individual selected countries.

Looking at previous studies conducted on similar topics in sub-Saharan Africa, this study uses various proxies to capture the impact of trade openness on economic growth. While previous studies tended to use the three measures of trade openness, which are total trade to GDP ratio, the ratio of exports to GDP, and the ratio of imports to GDP, the current study extends the debate by employing the trade openness index. This index is based on country size and geography. The inclusion of this particular proxy for trade openness is driven by the fact that SACU countries have

sharply differing country size and geography. The current study assumes that country size and geographical factors affect trade openness, which in turn contributes to economic growth (see Gallup, Sachs and Mellinger, 1998; Sachs and Warner, 1997).

This study also differs from other previous studies in that it uses the recently developed autoregressive distributed lag (ARDL) bounds testing approach, which has been found to be superior in short data points (Tang, 2004). Also, given the nature of the variables used in this study, the use of the ARDL bounds testing approach helps to avoid endogeneity and serial correlation problems (see Ghatak and Siddiki, 2001). Hence the relevance of the ARDL bounds testing approach to the current study.

To the best of my knowledge, this study may be the first of its kind to examine empirically and in detail the impact of trade openness and economic growth in South Africa, Lesotho and Botswana using four proxies including the trade openness index. Although not all SACU countries are included in the current study, the results from this study provide a picture of how trade openness affects economic growth given the differences in the selected SACU members' country size and geography.

Thus, the main contributions of this thesis are rooted in its practical and methodological contributions. First, the core problem of investigation of this study, which is about the impact of trade openness on economic growth in the selected SACU countries, reflects the practical contribution of this study. This thesis examines the issue of trade openness and economic growth in the three countries with quite significant differences in terms of economic development, market size and geography.

The second contribution of this study is methodological. It is against the background of disparities in market size and in geography that the current study constructed the trade openness index, which estimates residual trade openness after purging the differences in market size and geography. Hence, a major methodological contribution of this thesis lies in its use of the fourth indicator of trade openness (OPEN4), which was derived from the ordinary least squares (OLS) regression. In the underlying OLS regression, trade openness was regressed on market size variable, population, and the size of arable land. The first two explanatory variables, market size and population, capture the effect of country size on trade openness, whereas the arable land variable captures the effect of geography. In this thesis the percentage share of arable land in

total land area is used, as it is considered by the researcher to be the most relevant proxy for geography in South Africa, Lesotho and Botswana.

1.4 Justification for selected countries

The first and main reason for selecting these three countries in this study is that although they are members of SACU, they are at very different levels of economic structure and development. South Africa and Botswana are classified as upper middle-income countries, while Lesotho is categorised as a lower middle-income country (World Bank, 2017). Lesotho is also classified as a least developed country (LDC) according to the United Nations classification (see United Nations, 2017). In addition to the differences in their levels of economic development, these three selected countries have quite divergent market sizes.

Based on the World Bank World Development Indicators (2015), Botswana, followed by South Africa, has the largest GDP per capita relative to that of Lesotho. Considering the geographic differences between the three SACU countries studied, South Africa appears to have the largest land size as well as more arable land than Botswana and Lesotho, according to the World Bank World Development Indicators (2015). Therefore, given the considerably different levels of economic structures and development of the SACU countries, it implies that the extent to which each country benefits from trade openness is likely to vary compared with other SACU members. This makes it imperative to carry out a comparative empirical analysis so as to investigate how each country's trade openness influences its own economic growth. Such an investigation is perceived to offer some guidance to further research.

The other reason for incorporating the three SACU countries in this study is that, since these countries have implemented various policy reforms, some of which aim at enhancing trade openness, it is important to examine the trends in the trade sectors of these countries. It is also crucial to explore how economic growth policies have evolved in these countries. The third reason behind selecting South Africa, Lesotho and Botswana for this study relates to the differences in their country size and geography. For this reason, one of the measures of trade openness takes country size and geography into account.

1.5 Organisation of the study

This study is organised into eight chapters. Chapter 1 is an introduction to the study, followed by Chapter 2, which provides country-based literature review on trade openness and economic growth in South Africa. Chapter 3 covers country-based literature review for Lesotho, followed by a similar discussion for Botswana in Chapter 4. Thereafter, Chapter 5 presents the theoretical and empirical literature review on trade openness and economic growth. Chapter 6 discusses the methodology, while Chapter 7 provides a discussion of the econometric analysis and empirical findings. Chapter 8 concludes the study.

CHAPTER 2

TRADE OPENNESS AND ECONOMIC GROWTH IN SOUTH AFRICA

2.1 Introduction

This chapter presents the country-based literature review for South Africa. The literature reviewed covers South Africa's experiences of various developments that have affected the country's trade openness over time. This chapter is divided into seven sections including this introductory section. Following the introduction, Section 2.2 presents the origins of trade openness in South Africa, while Section 2.3 provides a discussion of South Africa's trade policy reforms. In Section 2.4, the study discusses different trade agreements for South Africa at multilateral, regional and bilateral levels. Section 2.5 analyses trends in trade performance, trade openness and economic growth, followed by a discussion on trade flows in Section 2.6. Section 2.7 presents the concluding remarks.

2.2 The origins of trade openness in South Africa

In South Africa, the issue of enforcing steps to encourage trade has been in existence for some time, with emphasis on agricultural and industrial sectors. During the period prior to 1925, several South African industries were inefficient, making it difficult for them to find enough markets in the country (Republic of South Africa "RSA", 1912:12). At that time, domestic industries were confronted with high costs of raw materials and skilled labour – a condition that made it difficult for these industries to grow efficiently. In 1910, the newly formed Union of South Africa (which in 1961 became the Republic of South Africa) appointed the Cullinan Commission on the Condition of Trade and Industry under Sir Thomas Cullinan, with the objective of inquiring about the condition of the existing industries. The commission recommended among other things that steps to encourage trade should be taken, but most importantly, that the agricultural and industrial undertakings be given adequate protection from foreign industries (RSA, 1912:12). To assist domestic industries with protection in their trading activities, the Commission recommended in many cases that prohibitive rates of duty be applied. Regarding the issue of encouragement of trade, it was recommended by the Commission that railway rates be reduced, especially those rates applied to domestic coal for export (RSA, 1912:16).

Despite the government's efforts to protect domestic enterprise from foreign competition, in about 1921 South Africa's manufacturers still continued to experience stiff competition from international enterprise, this being largely attributed to the rapid decline in the international price level (Van Biljon, 1934:107).The continuing pressure from foreign enterprise on domestic industry necessitated amendments to the existing tariff structure, which eventually gave way to the

inception of the 1925 Customs Tariff and Excise Duty Amendment Act. Regarding the imposition of customs duties on goods imported into South Africa, the Act firstly made a provision that customs duties should be applied according to the rates set in the maximum duty column of the First Schedule to the Act. The First Schedule presented duty rates for 15 different classes of imports. These classes covered goods from the agriculture, manufacturing and mining sectors on which tariffs of customs duties were to be levied. The second provision made by the Act was that certain goods should be admitted free of customs duty provided that such goods were imported for use only in the manufacturing industry (RSA, 1925:452).

Generally, South Africa's new trade policy that was brought about by the 1925 Customs Tariff and Excise Duty Amendment Act adopted an inward-oriented strategy that controlled imports mainly using protectionist tariffs (Matthews, 1983:160). These tariffs operated as the main instrument of industrial protection until 1948 when quantitative restrictions were introduced as the main instrument of industrial protection (Jenkins *et al*, 1995: 3). The system of quantitative restrictions involved the use of import permits as well as annual quotas for selected products.

In 1947, South Africa became a member of the General Agreement on Tariffs and Trade (GATT), which had direct implications for the country's tariff levels. The GATT's mandate is that member countries should enter into arrangements directed to the substantial reduction of tariffs and other barriers to trade (GATT, 1986:1). So, through the influence of its membership of GATT, from 1949 South Africa resorted to the extensive use of import licensing as the main instrument of industrial policy as opposed to tariff protection. The import licensing system seemed fit during the 1940s when South Africa was experiencing a continuing deterioration in its balance of payments. With the new system of import licensing, about three-quarters of imports to South Africa were subjected to licensing, with a few quotas from time to time (Fine and Rustomjee, 1996:188). The import licensing system also granted the imports of raw materials and capital goods priority over consumer goods, while it also enlarged the list of prohibited goods (Lachman, 1974:27). This system of import licensing lasted until the early 1980s.

In 1958, the Commission of Inquiry into Policy relating to the Protection of Industries (the Viljoen Commission) was established. The commission argued mainly that protection, especially of infant industries, was necessary to bring about innovations that would draw the economic system to a higher absolute level of income and welfare (RSA, 1958:1). In line with this argument, the commission called for the selective application of tariff duties. And since at that time the possibilities were limited in the mining and agricultural sectors, causing the burden of employment

creation to fall on the manufacturing sector, the Viljoen Commission also recommended that South Africa should restrict imports, raise exports and increase capital flows (Fine and Rustomjee, 1996:186). This recommendation was made with a view to aiding the development of domestic industries. Regarding the system of import-substituting industrialisation, the Viljoen Commission preferred the use of customs tariffs, as opposed to import controls (import quotas, subsidies, and rebates), as import controls have the major drawback of tending to reduce competition among suppliers of foreign goods (RSA, 1958:20). Consequently, the quantitative restriction of imports eventually gave way to inflation pressures in the economy.

In the late 1960s, due to the external pressures resulting from sluggish developments in world trade, South Africa went through economic problems, alongside the fact that most of the major economies in the world were experiencing a slowdown in their trade activities. For South Africa, the major economic problems toward the end of 1960s included relatively high rates of inflation, coupled with continued deficits on the current account of the balance of payments. The deficit in the current account was driven by the significant decline in the country's merchandise exports. During the 20-year period 1950 to 1970, South Africa had experienced a notable fall in exports, in which the exports-to-GDP ratio decreased from 22.2% in 1950 to 15.7% in 1970 (RSA, 1972: 623). The poor performance of South Africa's exports continued during the early 1970s as well, because of the slowdown in the major economies with which South Africa traded.

It was also evident by the early 1970s that the export sector did not play a major role in determining South Africa's economic activity, as the country's economic growth prospects largely depended on imports (RSA, 1972:7). In the face of sharp increases in the price of crude oil, which triggered considerable increases in import prices at that time, South Africa could no longer rely on imports as the main engine of economic growth. As a result, the country had to take drastic measures to combat the balance of payments problem. The measures included the tightening of import controls in November 1971, followed by a devaluation of the rand in December 1971. It was evident however, that the balance of payment deficit problem still needed more action so as to obtain a more lasting solution (RSA, 1972:1). This situation made it possible for the country to change the focus of trade policy towards increased exports. The beginning of negotiations towards a new era of liberalised trade was formally launched in 1972.

In 1972, driven by the desire to design and implement trade policy reforms that could enable a shift away from import substitution industrialisation and towards export-oriented industrialisation, South Africa established the Commission of Inquiry into Export Trade of the Republic of South

Africa, also known as the Reynders Commission. Since South Africa's export base was very narrow, comprising a limited range of commodities mostly destined for a few markets like the United Kingdom and the European Economic Community (EEC), a policy shift was necessary at the time. Thus, the Reynders Commission put specific emphasis on the need for South Africa to diversify exports from manufactured exports to non-gold exports in general (Bell, 1992: 84). Some of the measures South Africa adopted to accomplish the goal of shifting away from import substitution industrialisation included the relaxation of quantitative restrictions, reductions in tariffs, devaluation and direct export promotion measures (Bell, 1997:71). The Export Development Assistance Scheme, introduced in 1972, was one form of export promotion assistance from the government.

Concerning the developments in trade policy undertaken towards the end of the 1970s, the government decided that no new measures need be taken regarding imports, except that the rate of exchange should be flexible enough to maintain the competitiveness of goods produced in South Africa (RSA, 1979:31). However, it was later considered that the active use of the exchange rate was not sufficient to stimulate exports to such an extent that a growth rate of more than 3.6% a year would be achieved (RSA, 1979:31). This implied that South Africa's exports needed to be stimulated using other forms of assistance from the government. Next, a recommendation was made on export development in 1977 by the Van Huyssteen Committee. However, while South Africa was making efforts to move towards outward-looking industrialisation, the imposition of specific restrictions on exports to the country by United States Department of Commerce in 1978 posed serious implications to trade prospects. Among other things, these sanctions implied that South Africa would have restricted access to commodities originating from the United States (Spandau, 1979:15).

In September 1980, a double set of export incentives came into force, which introduced a tax allowance of 50% of the duty payable on dutiable inputs into manufactured exports; and a 10% tax allowance on the value added in manufacturing (Matthews, 1983:145). However, the use of the export incentive of a tax concession of 50% applicable to manufacturing inputs was later criticised by the Kleu Study Group, as this incentive was viewed to have discriminated in favour of imported inputs (RSA, 1985:17). In 1983, the Kleu Study Group was appointed to deliberate on South Africa's industrial policy and development strategy. Among other issues discussed by the appointed study group, the guidelines concerning protection of industry as well as the coordination of import replacement were of utmost importance. Regarding the protection of industry, the Kleu Study Group recommended that the protection of domestic industry through indirect measures

should be continued, however with caution, to keep the tariffs moderate and selective in order to avoid the cost-push effects that could be brought about by the tariffs (RSA, 1985:12). In this context, the South African government emphasised that import tariffs must be employed as the sole means of providing protection against all forms of foreign competition, whereas quantitative import control was to be discontinued as soon as tariff protection measures could be introduced (RSA, 1985:15). On the issue of import replacement, it was recommended that there should be better coordination of the policy of import replacement and export promotion and that the export incentives introduced in 1980 should be continued.

In the mid-1980s, the South African economy went through financial sanctions and other sudden economic pressures. One of the economic crises experienced occurred when huge repayments of foreign debts were demanded from South Africa in mid-1985 (Gidlow, 1988:139). In addition, the imposition of financial sanctions on South Africa in 1985 became a hindrance to trade liberalisation process in the country (Johnsson and Subramanian, 2001). Subsequently, because of the debt crisis, coupled with the deterioration of the balance of payments in the country, import surcharges were implemented in 1985. Another development in 1985 was the imposition of the dual exchange system. The dual exchange rate system is usually used to reduce the volatility of currency exchange. This system involves the use of two exchange rates that separate current account transactions from capital account transactions, which are typically volatile. The primary aim for imposing the dual exchange rate system in South Africa in 1985 was to separate the foreign exchange transactions of non-resident portfolio investors from all other foreign exchange transactions (Farrel, 2001:1). The imposition of the dual exchange rate system in South Africa resulted in a situation in which current account transactions became channelled through the commercial rand system, while capital account transactions became channelled through the financial rand system. In the light of these developments in South Africa, improvements in the current account were observed, with surpluses recorded in 1985 and ’86. The other improvement observed was in trade openness, which increased between 1984 and ’85, but dropped slightly in subsequent years.

In the light of deteriorating international competitiveness experienced during the 1980s, together with the need to create an employment-creating international competitiveness, South Africa had to restructure its trade and industrial policies further, with a tendency toward tariff reforms and supply-side measures. Following the end of the Botha presidency in 1989, the new government of South Africa decided to undertake economic restructuring with a view to creating more job opportunities, as well as enhancing economic growth (Department of Trade and Industry “DTI”,

1990: 6). As a result, the government introduced a package of supply-side measures with a view to stimulating industrial investment, job opportunities and exports.

The period beginning in the early 1990s witnessed the beginnings of a policy shift away from import protection and a new approach towards the promotion of exports (Rangasamy, 2009:604). As documented in the Growth, Employment and Redistribution Act (GEAR), which was adopted in 1996, the measures that were recommended to enhance more liberal trade in South Africa comprised the replacement of quantitative restrictions with tariffs, a reduction in the number of tariff lines, the abolition of import surcharges, a phasing down of tariffs by one third over five years, and the phasing out of the general export incentive scheme (RSA, 1996: 12 and OECD, 2002:272).

Despite the removal of global sanctions on South Africa after 1990, the performance of the country's economic growth in the early 1990s was much less satisfactory. Between 1995 and 2004, South Africa's real GDP grew at an average of 3%, compared with the 0.3% annual average growth rate which was recorded during the period 1985-1994 (Du Plessis and Smit, 2006:4). Though this performance signified a considerable improvement in economic growth, the 3% average growth rate was still not satisfactory for sustainable development and job creation. The poor growth performance was inevitable though, since in the first four years of the 1990s South Africa experienced macroeconomic conditions that were hostile to any significant economic growth (Jones and Inggs, 2003:2). At that time, South Africa experienced a continuously declining gold output, coupled with falling gold price. These factors, among other things, slowed down the country's economic growth. So, it became evident that a more diversified export base was needed for South Africa to achieve significant economic growth.

In 1996 the Growth, Employment and Redistribution strategy (GEAR) was developed, with the aim of creating a competitive, fast-growing economy. In the medium term, some trade and industrial policies had to go through reforms. In the GEAR strategy, the South African government emphasised the need for a policy shift away from demand-side interventions like tariffs and subsidies, as these interventions are detrimental to international trade through their effect on prices received by producers (RSA, 1996:12). So, driven by the desire to achieve stronger competitiveness among domestic industries, as well as to achieve greater export promotion, South Africa's trade policy reforms during the 1990s favoured export promotion with a variety of incentives, including tariff concessions, credit facilities, financial assistance and guarantee facilities (WTO, 1998:xii). In this new era, import protection ceased to be the main instrument of

trade policy. Rather, South Africa's new trade policy geared towards adopting outward-oriented measures that aimed at enabling the country to liberalise its trade as well as to achieve a stronger export orientation (Rangasamy, 2009: 604; and RSA, 1996:12).

The implementation of outward-oriented measures during the 1990s led to the replacement of demand-side measures with supply-side measures. These supply-side measures helped encourage domestic firms to invest in products and processes that were internationally competitive (Gouws, 2005:A.5). One of the supply-side measures adopted was tariff liberalisation. It became highly effective in bringing about a gradual reduction of import tariffs during the 1990s (Hviding, 2005; RSA, 2006). For instance, between 1988 and 2004, the average unweighted tariff on imports was reduced by half as the tariff rate was cut from 22% to about 11% (Nowak, 2005: 8). The other supply-side measure introduced was the General Export Incentive Scheme (GEIS), adopted in 1990 with the aim of stimulating exports. GEIS was a performance-based scheme that offered qualifying exporters assistance based on a given formula as provided in the general guidelines governing the scheme (Department of Trade and Industry, 1992:3). GEIS was later phased out in 1997 due to the requirements of the General Agreement on Trade and Tariffs (Van den Heever, 1994:3).

Following the adoption of outward-oriented measures in the 1990s, the South African economy experienced some trade-led growth, something the country had never experienced before (Jones 2003: 333). The achievement in trade was driven by several factors, some of which reflected developments in the country's trade policy. First, following the lifting of global sanctions around the mid-1990s, trade integration helped diversify South Africa's economy away from heavy reliance on traditional exports, particularly mining exports (Nowak, 2005: 8). This export diversification was witnessed by an increase in the share of manufacturing exports in GDP, particularly during 1995-2004. The average annual change in manufacturing exports during 1995-2004 was 2.6%, compared with the -0.4% average annual change recorded during 1985-1994 (Du Plessis and Smit, 2006:5).

The second contributing factor to South Africa's trade-led growth experienced during the 1990s was trade liberalisation. South Africa's trade liberalisation of the 1990s resulted in greater openness in the economy by helping to reduce the anti-export bias as well as by reducing the heavy protection of domestic industries. Because of the more liberal trade regime, together with increased attention to export promotion, both exports and imports grew during the 1990s, though modestly. As a percentage of GDP, exports of goods and services grew by an average 4%

between 1995 and 2004, whereas imports of goods and services grew by 5.4% over the same period (Du Plessis and Smit, 2006:6). This relative growth in exports and imports indicates an expansion in trade openness.

The World Trade Organisation (WTO), through its General Agreement on Tariffs and Trade (GATT), has had a greater influence on South Africa's trade policy. In June 1993, the GATT Council's evaluation of South Africa's trade policy review arrived at the conclusion that South Africa had a very complex tariff structure. The council recommended that South Africa improve its Uruguay Round tariff offer concerning industrial and agricultural tariffs (GATT, 1993:4). In response, during the Uruguay Round Protocol of GATT 1994, South Africa made offers regarding the elimination and reduction of tariff rates as well as non-tariff barriers to trade. The first offer concerned industrial tariffs, in which about 12 800 tariff lines were to be rationalised into no more than a thousand (Hirsch, 1994:1). The second aspect of the offer regarding industrial tariffs entailed the reduction of industrial tariffs by about 33% on average in five equal rate reductions a year by 1999. Regarding the agricultural tariffs, the GATT agreement on agriculture addressed aspects such as concessions and commitments to market access, as well as domestic support and export subsidies to be undertaken by the member countries (WTO, 1994).

Consequent to the signing of the Uruguay Round of Multilateral Negotiations on 15 April 1994, the WTO agreement became a vital international agreement regulating South Africa's international trade (Department of Trade and Industry, 1994:64). The WTO mandate seeks to ensure a multilateral trade liberalisation in its beneficiary countries. South Africa has responded to the WTO's call for tariff liberalisation. In the 1990s, South Africa's average tariffs fell from 28% to 10%, while the average manufacturing tariff dropped from 30% to 16% (OECD, 2002:273). Currently, South Africa's economy can be regarded as a relatively open economy, as the level of protection has been reduced substantially. As highlighted by the SA Reserve Bank (1998:35), the WTO agreement has facilitated South Africa's trade openness in a notable way. The role of WTO, as the SA Reserve Bank pointed out, was in that the WTO agreement helped to harness the country's trade openness by ensuring that there is a reduction and restructuring of import tariffs, a removal of import surcharges, as well as the phasing out of the General Export Incentive Scheme. Among other things, the most notable reductions in the level of protection have been experienced in customs duties and tariff rates. About 56% of customs duties are now set at zero, while the simple MFN tariff stands at 7.7%, down from the 23% that was set in the 1990s (Vickers, 2014:3).

Apart from the role played by the WTO in enhancing South Africa's trade openness, there are other external trade relationships that have also helped improve the country's trade openness. South Africa has also seen improvements in its trade openness resulting from further developments in external trade relations. South Africa's external trade relations largely involve the trade agreements the country is involved with regionally and abroad. One such trade agreement is the EU-SADC EPA, which was signed in 2016 with SADC Economic Partnership countries including South Africa, Lesotho, Botswana, Namibia, Swaziland and Mozambique. Among other things, the EU-SADC EPA aims at supporting economic diversification in SADC EPA members through granting freer access to intermediate goods imported from the EU to these countries (European Commission, 2016).

Before the implementation of the EU-SADC EPA, the Trade, Development and Cooperation Agreement (TDCA), which was signed with the European Union in 1999, was in force. Implemented in 2000, the TDCA is a free trade agreement that aimed at enabling the free movement of goods between South Africa and the Europe Union as articulated in the agreement. The AGOA initiative, which allows duty-free trade of South Africa's exports to the United States, has also boosted bilateral trade between South Africa and the United States.

South Africa also continues to be a key trading partner in sub-Saharan Africa, where the country is a member of SADC and SACU. In addition, South Africa has also signed a partnership with Brazil, India and China, forming the BRICS group of countries. The achievements emanating from South Africa's external trade relations have been demonstrated by an increase in the country's trade openness from 41% in 1994 to 47% in 1999 (South African Reserve Bank, 2000:34).

The above observations regarding the development of trade openness in South Africa indicate that South Africa's membership of external bodies has to some extent benefited the country's trade openness. So, it is not surprising that South Africa's trade openness has expanded rapidly in recent years as a result of the trade liberalising reforms the country introduced in the early 1990s (Hviding, 2006: 135).

2.3 Trade policy reforms in South Africa

Because of the recommendations of the Reynders Commission (1972), South Africa gradually introduced measures to liberalise its trade, as presented in Table 2 below. The process of trade liberalisation normally incorporates two things: first, the removal of barriers to trade, and second, the introduction of export promotion measures (Bell, 1992: 82). In South Africa, the relaxation of quantitative restrictions and the introduction of the Export Development Assistance Scheme were

the first interventions applied during the trade policy reform process of the 1970s. The aim of these interventions was to move the economy away from import substitution industrialisation towards a more export-oriented trade regime. However, it can be argued that the relaxation of quantitative restrictions on imports was not sufficient to liberalise imports considerably. The explanation for this is that South Africa's tariff rates remained high and very complex in structure at that time. Therefore, the overall trade policy of the time still remained protectionist in nature (Edwards, 2006: 2). This was because these new measures inadvertently raised the level of protection in the economy (Mabugu, 2005:8).

Table 2.1 below presents major policy interventions in South Africa since the time of the Cullinan Commission in 1910. These interventions started with the introduction of protective measures in the form of customs duties and protectionist tariffs. At some stage towards the end of the 1940s, quantitative restrictions and import licenses were introduced as instruments of trade protection. During this period South Africa was experiencing persistent deterioration in its balance of payments. By being a member of WTO, it was permissible for South Africa to apply quantitative restrictions as the main instrument of trade protection. Under certain circumstances, Article XII of the WTO's GATT permits the use of quantitative restrictions to safeguard the balance of payments (GATT, 1947:18). This was why South Africa resorted to the use of quantitative restrictions and import licenses at that time, when the country needed to reduce its escalating balance of payments deficit. However, the disadvantage of the system of quantitative restrictions and import licenses is that it could not sustain the South African economy much longer, especially in the phase of deteriorating industrial activity in the 1960s.

When the import substitution regime had failed to enhance economic growth in South Africa in the late 1960s and early '70s, this prompted a change in trade policy towards a more liberal, export-promoting industrialisation. During the first phase of trade liberalisation, from 1972 to '76, reform policy measures adopted included the dismantling of quantitative restrictions on imports, and the provision of export incentives. The second phase of South Africa's trade liberalisation, which began in 1983, comprised reforms that further liberalised imports and offered more export assistance. The limitation of the export assistance measures was that in fact they were less effective in promoting exports, as the export incentives were very limited in scope (Jenkins *et al*, 1995:6).

With pressure on the balance of payments in the mid-1980s, attempts were made to reduce imports through the introduction of formula duties and the levying of an import surcharge of 10%

on all imported goods not bound by the GATT. However, later, the import surcharges introduced in 1985 raised the level of protection in the economy (Edwards, 2006:2). Consequent to that, there was a pressing need to revive the economy through a further set of trade policy reforms, particularly with the aim of increasing exports. The measures applied during the trade policy reforms of the early 1990s included the phasing out of import surcharges, the conversion of quantitative restrictions into tariffs, and the termination of subsidies to exporters under the General Export Incentives Scheme (GEIS). These interventions resulted in a reduction in the number of products bound to formula duties.

Lately, export subsidies are no longer offered under the GEIS, as they were terminated in 1997. However, the Department of Trade and Industry (DTI) provides some assistance to exporters through Export Marketing Incentive Assistance (DTI, online). In addition to the trade reforms discussed above, trade agreements other than those to which South Africa is a signatory have also been included in Table 2.1, as South Africa's trade policy has been influenced by its membership of the bilateral and multilateral agreements. These trade agreements are discussed in the next section of the thesis.

Table 2.1 Sequencing of major policy interventions in South Africa (1910-2016)

Year(s)	Policy intervention
1910	Cullinan Commission introduced: ● prohibitive rates of duty recommended to protect domestic industries ● reductions in railway rates recommended to encourage domestic trade and the export of goods
1925	Implementation of the 1925 Customs Tariff and Excise Duty Amendment Act: ● application of customs duties to maximum level ● duty-free importation of selected goods used in manufacturing ● adoption of import-substituting industrialisation ● introduction of protectionist tariffs
1947	Joined the General Agreement on Tariffs and Trade (GATT)
1948	Introduction of quantitative restrictions as the main instrument of protection
1949	Adoption of the import licensing system. About 75% of imports to South Africa were subjected to licensing
1958	Establishment of the Commission of Inquiry into Policy relating to the Protection of Industries (the Viljoen Commission):

	● selective application of tariff duties recommended ● restriction of imports and promotion of exports recommended ● recommendation of import tariffs instead of quantitative restrictions as a policy instrument for import substitution industrialisation
1972	Establishment of the Commission of Inquiry into Export Trade of the Republic of South Africa (Reynders Commission): ● policy shift away from import-substituting industrialisation – relaxation of quantitative restrictions, reduction of tariffs, devaluation, and endorsement of direct export promotion measures ● export diversification strategies recommended
1972	Introduction of the Export Development Assistance scheme: Tax allowance for marketing expenses incurred in connection with exporting
1976	Generalised System of Preferences (United States of America)
1977	Recommendation of export development by the Van Huyssteen Committee
1977	United Nations Security Council sanctions against South Africa
1978	Specific restrictions on exports to the Republic of South Africa by the Bureau of Trade Regulations of the US Department of Commerce
1979-'80	Rise in gold price resulting in sharp appreciation of the rand
1980	Introduction of a reinforced system of export incentives
1983	Recommendation for a move away from import-substituting industrialisation by the Kleu Study Group
1983	The dual exchange rate system is abolished
1983-'85	Relaxation of import permits by switching from a positive to a negative list Reduction of quantitative restrictions is resumed – proportion of imports subjected to quantitative restrictions fell from 77% to 23% Real depreciation of rand
1985	Imposition of financial sanctions on South Africa
1985	Recommendation of a dual system of import-substitution industrialisation and export promotion by government White Paper
1985	Dual exchange rate system re-introduced
1985	Introduction of 10% import surcharge on all imported goods not bound by GATT
1987	Proactive move towards trade policy reform by the Board of Trade and Industry

1989	Introduction of structural adjustment programmes involving export incentives for motor vehicles, and textile and clothing industries
1990	Introduction of the General Export Incentives Scheme (GEIS): ● provision of a tax-free financial subsidy to exporters based on the value of exports, degree of processing and domestic content of the exported product
1990	Beginning of the phasing out of import surcharges
1994	South Africa's re-entry into the global trade arena
1994	Import surcharges abolished for capital and intermediate goods
1994	The conversion from quantitative restrictions to tariffs is completed
1995	Elimination of the remaining import surcharges is completed
1995	Enactment of SA's GATT Uruguay Round mandate
1996	Formulation of the new Tariff Rationalisation Process (TRP)
1996	Signing of the new bilateral trade agreement between Zimbabwe and South Africa
1996	Signing of the SADC Free Trade Protocol
1997	Termination of export subsidies provided under GEIS
2000	Implementation of SA-EU Trade, Development and Cooperation Agreement (TDCA)
2000	Granting of preferential access to the US for clothing and selected products under the Africa Growth and Opportunity Act (AGOA)
2000	Implementation of the Southern African Development Community Free Trade Protocol
2002	Inception of the 2002 SACU Agreement: ● new institutional structure introduced ● a dispute settlement mechanism ● common policies on industrial development, agriculture, competition and unfair trade practices a requirement ● introduction of a new system for a common revenue pool and sharing formula
2004	Signing of the preferential trade agreement between SACU and MERCOSUR
2006	Signing of the EFTA-SACU Free Trade Agreement. The agreement emphasises: ● competition ● intellectual property, services, investment and government procurement ● economic cooperation and technical assistance

	● institutional and procedural provisions
2008	Signing of the SACU Trade, Investment and Development Cooperation Agreement (TIDCA) with the US
2008	Negotiations on SADC-EAC-COMESA Tripartite FTA commence
2011	Signing of the Brazil, Russia, India, China and South Africa (BRICS) partnership
2015	Launching of the COMESA-EAC-SADC FTA
2016	Signing of the EU-SADC EPA

Sources: Department of Trade and Industry (South Africa); EFTA online; Edwards (1996); Farrel (2001); Geldenhuys (1979); Jenkins *et al* (1995); Johnsson and Subramanian (2001); Johnson (1978); SACU (2008); WTO (1998; 2009); Kowalski *et al* (2009)

2.4 Trade agreements signed by South Africa

Following its reintegration into the global trade community, South Africa's authorities took measures to reform its trade policy within the contexts of multilateral, preferential, non–reciprocal, bilateral and regional trade. However, the influence of international organisations and regional trade agreements on South Africa's trade policy has been present even before the lifting of international trade sanctions on South Africa in the early 1990s. Prior to 1990, South Africa's trade policy operated within the framework of the General Agreements on Tariffs and Trade, and regionally within the South African Customs Union (Matthews, 1983: 159). So far, South Africa' trade policy still reflects the country's commitments to its external trade relations.

2.4.1 Multilateral and non-reciprocal trade agreements

In the context of multilateral trade, the most influential body to South Africa's trade policy is the World Trade Organisation (WTO), which has set up a framework for more liberal trade within its member countries. South Africa has been a member of the WTO General Agreement on Trade and Tariffs (GATT) since 1947. The WTO's Uruguay Round of GATT has had a direct influence on South Africa's trade policy instruments. Firstly, the Uruguay Round tightens provisions related to the use of subsidies (Altman, 1994:20). This recommendation prohibited the use of the General Export Incentives Scheme (GEIS) that was introduced in South Africa in 1990. With this recommendation, South Africa had to phase the GEIS out by 1998.

The WTO GATT Uruguay Round Protocol also commits its members to eliminate or reduce tariff rates and non-tariff measures applicable to trade in goods (News of the Uruguay Round, 1993: 6). With its commitment to ensure a reduction in trade barriers, the major steps South Africa took

to reduce its trade barriers included a reduction in tariffs and a simplification of the tariff structure; the removal of quantitative restrictions on imports; and the phasing out of the export subsidy scheme. The reduction in tariffs took place mainly in the manufacturing and agriculture sectors of the South African economy. Between 1992 and 2002, the simple average tariff on manufacturing goods was reduced from 21% in 1992 to about 11.5% in 2002 (Hviding, 2005:135). In the agriculture sector, there was a reduction in tariff protection from 5.5% in 2002 to 3.7% in 2009 (World Trade Organisation, 2009:335).

Moreover, South Africa's being a signatory to the WTO multilateral trade agreement has, to some extent, helped improve the country's foreign and national trade. The benefits South Africa obtains from the WTO agreement are, among other things, explained by the fact that South African exporters enjoy better access to foreign markets though the reduction in tariffs and the elimination of non-tariff barriers (Department of Trade and Industry, 1994: 64). In the case of South Africa, the WTO GATT is estimated to cause a 4.34% increase in total exports and a 2.61% increase in total imports (Van den Heever, 1994b:26). So, it is not surprising that the role of multilateral trade agreements has been given the stamp of approval by the domestic authorities, particularly in the country's Growth Employment and Redistribution strategy (GEAR). In 1996, the GEAR strategy emphasised that South Africa should incorporate in its trade policy an issue of the expansion of market access, which could be achieved in two ways: first, through preferential trade arrangements with industrial countries; and second, through the pursuit of regional economic integration (Republic of South Africa, 1996:13).

South Africa also benefits from the Generalised System of Preferences (GSP), which is a non-reciprocal trade agreement. Adopted by the United Nations Conference on Trade and Development (UNCTAD), the rationale of the GSP is to provide certain products originating in developing countries with preferential market access to developed country markets (Jones 2006:3). Moreover, as indicated by United States Agency for International Aid and Development (2008: 3), because of GSP's unilateral character, each preference-giving country determines the product coverage, the level of tariff preference applicable, rules of origin requirements, and any other conditions and criteria under which such preferences are granted. This means that goods complying with the conditions of the US GSP, for example, will not necessarily comply with the EU GSP (European Commission, 2014:1). The GSP programme was set to expire at some point, but South Africa and other eligible least developed countries could still receive the GSP preference under the Africa Growth and Opportunity Act (AGOA). Under the GSP, eligible

products originating in South Africa are granted a duty-free access to the United States, the EU, Russia, Switzerland, Turkey, Japan and Canada (DTI, no date).

2.4.2 Regional trade agreements

The most recent development around trade agreements affecting South Africa is the launching of the Continental Free Trade Agreement (CFTA) negotiations, which took place in June 2015. Among other things, the CFTA seeks to deepen regional integration in the African continent through the creation of a single continental market for goods and services and more liberalised trade (Mevel and Karingi, 2012).

Looking at other trade agreements in the region, South Africa joined the Southern African Development Community (SADC) in 1996, a trade bloc made up of 15 countries from the Southern African region. The SADC Trade protocol, which came into force on 1 September 2000, acted as another crucial factor contributing towards South Africa's trade policy. One of the aims of the SADC Trade Protocol is to ensure liberalised trade flows between its member countries through the elimination of barriers to trade between member countries (SADC, 1996:11). Article 4 of the SADC Free Trade Protocol articulates the elimination of import duties on goods that originate from SADC member countries. In accordance with the SADC Trade Protocol, most tariffs rates were reduced in South Africa during the past decade. Regarding the South African economy, the intention was to eliminate tariffs on most intra-SADC imports within five years, while the other members could do so within eight years (South African Reserve Bank, 2001: 35). For South Africa and its SADC partners, the benefits of SADC membership have been reciprocal. SADC has not only increased South Africa's regional market access but has also helped reduce the negative trade balance that other countries have against South Africa (SADC 2000: 21).

South Africa, together with Botswana, Lesotho, Namibia and Swaziland, is a member of the South African Customs Union (SACU). SACU was union originally formed in 1910 between the four countries in Southern Africa, with the primary goal of promoting economic development through regional coordination of trade (SACU, 2012). The South African Customs Union now operates under the 2002 SACU Agreement, which replaced the 1969 SACU Agreement. Through adherence to the SACU mandate, member countries adapt their trade policies in a manner that reflects the common policies covered in the agreement. As reported by the South African Customs Union (2009:10), governed by Article 2 of the 2002 SACU Agreement, SACU is characterised by free movement of goods between the member countries. Also, goods originating from outside the union are subjected to the common external tariff. Member countries also share the customs

revenue, based on the predetermined revenue-sharing formula. It has been reported further by the Southern African Customs Union (2010: 14) that trade facilitation is a key component of the 2002 SACU agreement, which was introduced with the view to improving the trade environment. One of the target areas included in SACU's trade facilitation programme is the removal of non-tariff trade barriers, with a view to improving the movement of goods across the borders. Trade facilitation continues to be one of the key issues highlighted in most trade negotiations, including the 2013 World Trade Organisation's (WTO) Doha Round of Negotiations. According to WTO (2014:36), trade facilitation involves simplification of customs procedures by reducing costs and improving the speed and efficiency of service delivery.

In the quest of fostering trade partnerships, SACU has during the past decade taken platforms for negotiations with various global markets, particularly in Europe, North America and South America. Since 2003, SACU has undertaken several free trade negotiations including the SACU-US free trade negotiations, the SACU-EFTA negotiations, and the SACU-MERCOSUR negotiations with the Southern Common Market (Central Bank of Lesotho, 2003). Incepted in July 2008, the SACU-USA Trade and Investment Development Cooperative Agreement (TIDCA), aims at the promotion of an attractive investment climate, as well as at the expansion and diversification of trade between SACU and the US (SACU, 2009:18). Then again, South Africa and other SACU countries also benefit the SACU-EFTA, which entered into force in 2008. According to the Southern African Customs Union (2011:18), the SACU-EFTA grants exporters from the European Free Trade Agreement as well as those from the SACU area the opportunity of enjoying trade preferences. The agreement also seeks to promote trade between EFTA and SACU countries through the elimination of duties on imports coming to SACU from the EFTA area.

In addition, the SACU-Mercosur Preferential Trade Agreement entered into force on 1 April 2016 between SACU countries and Argentina, Brazil, Paraguay, and Uruguay. This agreement offers tariff reductions on selected goods, inducing: plastic, steel, textile, chemical, electronic, automotive, capital and agricultural products (Brazil Ministry of Foreign Affairs, 2016). Lastly, the COMESA-EAC-SADC FTA, which was launched in June 2015, is another agreement that has important implications for South Africa's trade relations in the region. Among other things, the aim of the COMESA-EAC-SADC FTA is to promote accelerated economic integration in the continent (EAC, no date).

2.4.3 Bilateral trade agreements

Since June 2016, the EU-SADC EPA has been in place, replacing the TDCA, the Cotonou Agreement and the EBA initiative. Among other objectives, the EU-SADC EPA seeks to grant freer access to intermediate goods imported from the EU to the SADC EPA member countries to support their economic diversification as well as to strengthen regional integration in SADC (European Commission, 2016). Before the implementation of the EU-SADC EPA, South Africa and the European Community had signed an agreement on Trade, Development and Cooperation (TDCA), which was implemented in 2000. The aim of the TDCA was to allow the European Community and South Africa to establish a free trade area in which the free movement of goods in all sectors is enabled. Among other objectives, the TDCA sought to promote the expansion and reciprocal liberalisation of mutual trade in goods, services and capital (TDCA, 1999:5).

The African Growth and Opportunity Act (AGOA) is another bilateral agreement to which South Africa is a signatory. AGOA was enacted on 18 May 2000 by the United States of America, with the aim of granting market access to the products of qualifying sub-Saharan African countries (United States Department of Commerce, 2014). By granting sub-Saharan countries enhanced trade preferences, higher levels of trade and foreign direct investment will be encouraged in sub-Saharan Africa (United States, 2000:3). There are however, specified requirements that should be met for countries to be beneficiaries of AGOA. As highlighted by the United States (2000:4), among other requirements, Section 104 subsection (a)(1)(C) of the African Growth and Opportunity Act stipulates that for a sub-Saharan African country to be eligible, it must have made continual progress toward the elimination of barriers to United States trade and investment.

South Africa and other qualifying African countries have benefited from the AGOA initiative since October 2000. While AGOA was initially set out to last until September 2008, it was extended to 2015 by the US government in July 2004 (AGOA, 2014:1). AGOA has provided South Africa with duty-free access for exports from different sectors. Eligible exports include agricultural products, forest products, chemicals, energy-related products, textiles and apparel, footwear, transport equipment, electronic products, machinery, minerals and metals.

2.5 Trends in performance of exports and imports, trade openness and economic growth

This section of the discussion provides an analysis of the performance of selected economic indicators, particularly those that can be linked to trade openness in South Africa. The discussion starts with an exploration of the performance of exports and imports in South Africa over a 53-year period beginning in 1960. This discussion deals with trade performance in South Africa, in which the shares of exports and imports in GDP are presented together with the analysis of trends in the growth of exports and imports. The discussion in this section is concluded with an analysis of trends in trade openness and economic growth in South Africa.

2.5.1 Performance of exports and imports in South Africa (1960-2016)

Figure 2.1 below shows trade performance in South Africa, as indicated by the proportions of exports and imports in GDP. South Africa's exports and imports made quite different contributions to GDP in the years 1960-2016. While the shares of both exports and imports in GDP remained below 40% throughout, the share of imports was consistently above 20%, reaching a peak of 38.9% in 2008. It is also evident from that figure that during the 1960s and early '70s, a downward trend was experienced in the share of exports to GDP. This downward trend can be explained by the slowdown in economic activities at that time, which caused a decline in South Africa's exports. In particular, due to the decreased global demand for South African exports during the 1960s and early '70s, a continued decline in South Africa's exports was experienced, which resulted in poor performance of South Africa's exports (RSA, 1979:7).

From 1972 onwards, the share of exports in GDP improved, as shown in Figure 2.1. This improvement in South Africa's share of exports in GDP corresponded with changes in the country's trade policy that were introduced in 1972 to encourage a move towards export-oriented industrialisation. While the share of exports in GDP showed a continued increase in the early to mid-'70s, Figure 2.1 shows a decline in the share of imports to GDP in 1977, followed by stationary growth until 1980. This decline in the share of imports corresponded with the declines in South Africa's imports at that time. As reported by the Republic of South Africa (1979: 9), during 1977, South Africa's imports fell considerably as a result of factors that contributed to reducing the emphasis on imports in domestic demand.

The beginning of the 1980s was met with persistent declines in the shares of exports and imports in GDP. As indicated in Figure 2.1, in the early 1980s, the share of exports in GDP decreased considerably. However, in the mid-'80s, the share of exports in GDP began to pick up. But towards the end of the '80s, Figure 2.1 shows that the share of exports to GDP began to fall considerably

until the early ’90s. As shown in Figure 2.1, the share of imports in GDP – which had improved from about 1984 – also followed a downward trend from about 1989 to ’93.

The early 1990s was a period of economic restructuring in South Africa, in which the country’s trade policy was also reformed. This new era of trade policy reform corresponded with improvements in the performances of exports and imports in GDP. As Figure 2.1 indicates, from the early 1990s South Africa experienced increases in the share of both exports and imports in GDP. Figure 2.1 also reveals a further expansion in the share of South Africa’s exports in GDP between 1994 and ’97. This expansion in the share of exports to GDP corresponded with the rapid growth in export volumes that was experienced at that time. As highlighted by the South African Reserve Bank (1997:42), by 1997 South Africa’s volume of exports had grown at an average annual rate of 13% since 1995, which exceeded the 6% growth in international trade. As explained by the South African Reserve Bank (1997:43), the main contributing factor to this expansion of exports was the rapid growth of South Africa’s manufactured exports, experienced particularly from the beginning of 1996.

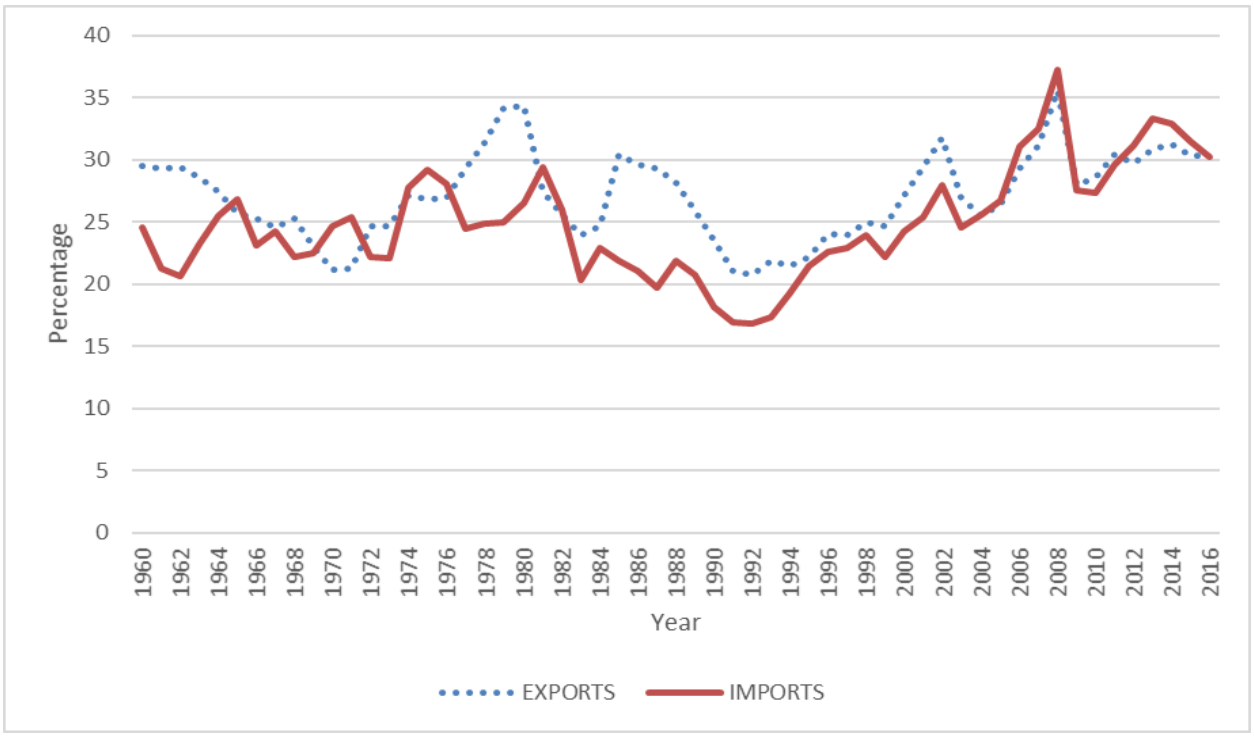
Considering the performance of the share of imports to GDP, Figure 2.1 shows persistent fluctuations during the 1960s and ’70s, followed by a continued downward trend between 1982 and ’93. Thereafter, a modest increase over the period 1994-’98 was experienced, which signalled that the country’s volume of imports relative to the GDP had risen. The increase in the volume of imports was reflected in a rise in South Africa’s imports penetration ratio. This ratio rose from 26.8% in the first quarter of 1997 to 28.2% in the first quarter of ’98 (SA Reserve Bank 1998:39). This rise in the imports penetration ratio indicated that the physical quantity of imported goods had grown faster than gross domestic expenditure over that period. As shown in Figure 2.1, from the mid-1990s an evident upward trend was observed for South Africa’s share of imports in GDP.

Despite the observed upward trend in the share of imports to GDP, there was a decline in the share of imports to GDP in 1999 and again in 2003 as shown in Figure 2.1. The decline in the share of imports to GDP that occurred around 1999 corresponded with the slowdown in the growth of South Africa’s imports at that time. This slowdown in import growth was attributed to the depreciation of the rand, which consequently raised the prices of imported goods (SA Reserve Bank, 1997: 45). On the other hand, the decline in the share of imports to GDP in 2003 corresponded with a sluggish growth in imports in that year. The volume of imports showed little change from the first to the second half of 2003 (South African Reserve Bank, 2003:33).

It can be further deduced from Figure 2.1 that there was a recovery in imports from 2004 to '08, as indicated by their rising share of GDP over that period. This improvement in the share of imports in GDP can be explained by the accelerated growth in the value of imported goods that occurred in 2004. A robust increase was experienced in the value of goods imported to South Africa, which had been driven by the appreciation of the rand during the first half of 2004 (South African Reserve Bank, 2003:34).

In 2008, a sharp downturn experienced globally spilled over to South Africa as well (South African Reserve Bank, 2008/09: 1). Flowing from this economic downturn, the shares of both exports and imports in GDP dropped sharply during 2008-'09, as shown in Figure 2.1. However, after 2009 South Africa experienced some improvements in the shares of exports and imports in GDP, with the share of imports dominating that of exports in the most recent years. In 2013, for instance, the share of imports in GDP was about 34%, while the share of exports in GDP was about 31% (World Bank, 2014b). By 2016, both exports and imports share in GDP stood at 30% as revealed in Figure 2.1.

Figure 2.1 South Africa's exports and imports as percentage of GDP (1960-2016)



Constructed from World Bank (2016)

2.5.2 Performance of trade openness and economic growth in South Africa (1960 - 2016)

In Figure 2.2 below, the study presents the trends in trade openness and economic growth in South Africa during the period 1960-2016. One of the major observations from the figure is that during the period under review, South Africa's level of trade openness, measured by the ratio of exports plus imports to GDP, has remained above 40%, apart from 1991 when 39% was recorded. As shown in figure 2.3, in 2013, trade openness stood at 65%. With its current level of trade openness, which exceeds 60%, South Africa can be regarded as a relatively open economy. The country's economic growth rate has remained below 10% throughout the reviewed period, with negative growth rates in some years. As figure 2.2shows, the highest economic growth rate South Africa achieved was in 1965, when the country's economic growth was 8.89%.

During the early 1970s, South Africa's trade openness only increased marginally compared with its performance in the previous decade. South Africa's economic growth also performed poorly in the '70s. While South Africa's economic growth performed exceptionally well in the '60s, this performance could not be maintained through the '70s. As reported by the Republic of South Africa (1979: 55), one of the problems faced by the country's economy during the '70s was an imbalance between domestic savings and investment that resulted in persistent deficits on the balance of payments current account, particularly during the period 1970 to '76. As figure 2.2 shows, by the mid-1970s the economic growth rate had fallen as low as 1.7% a year, reflecting a considerable decline in economic activity. On the other hand, Figure 2.3 shows that by 1975, trade openness was above 57%.

Considering the period starting in 1980, a sharp decline in trade openness occurred, as Figure 2.2 shows. This decline in trade openness coexisted with an evident downswing in the country's economic growth until 1984, when the economy began to recover. However, it should be noted that during the 1980s, the growth rate in trade openness did not slow to the same extent as economic growth. At that time, when the economy began to recover, the growth in non-gold export volumes was rising faster than that in GDP (Kusi, 2002:10). This increase in non-gold exports helped maintain an upward trend in trade openness, considering that the country's import volumes were declining at that time. Despite this recovery in the performance of trade openness, as Figure 2.3 shows, by 1989 trade openness was around 48.1%, which was 12.9% down from its position in 1979. As Figure 2.2 also reveals, until the beginning of the 1990s, South Africa's economic growth remained quite low, with a record low of -0.3% recorded in 1990.

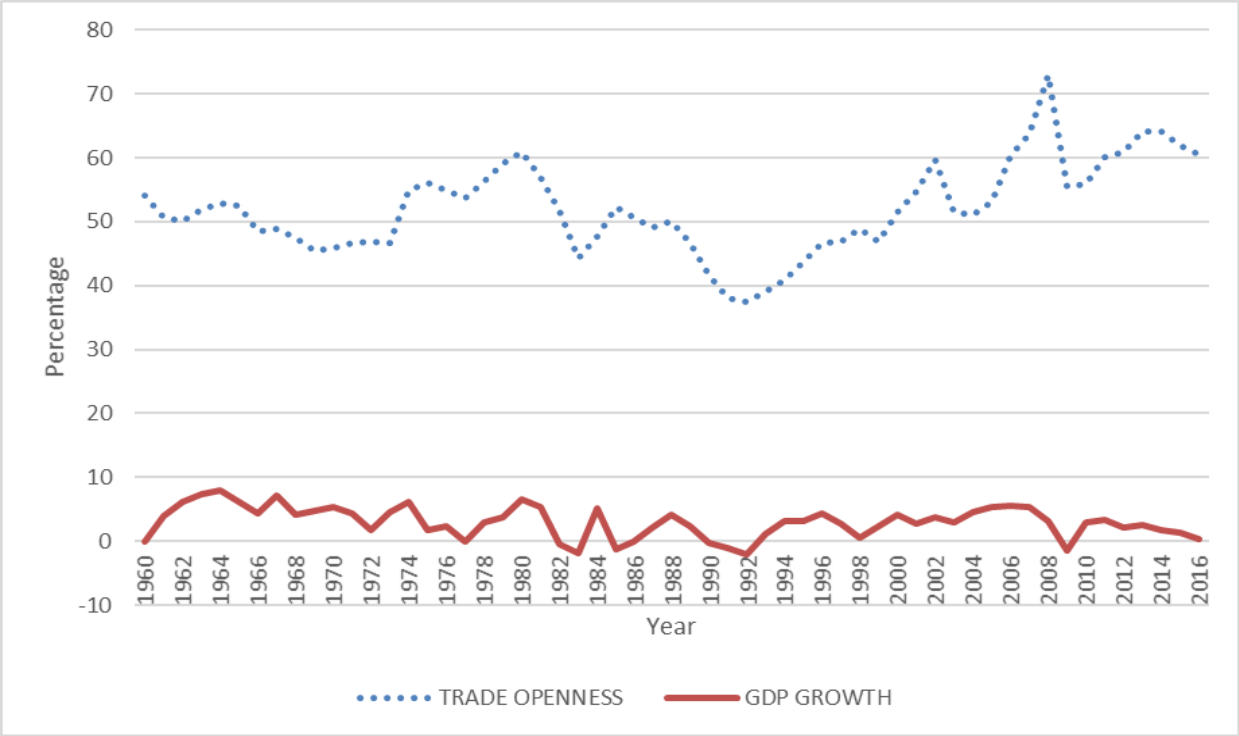
The 1990s witnessed a recovery in South Africa's economic growth from -0.3% in 1990 to 3.1% in 1995, as shown in Figure 2.2. During the same period, trade openness also improved, although slightly. As shown in Figure 2.2, after the mid-'90s, South Africa's trade openness began to rise at a much faster rate. This is explained in part by the improved performance of the country's trade. As indicated by Edwards and Lawrence (2006: 17) and Mabugu and Chitiga (2007: 8), part of this improvement in South Africa's trade performance was due to changes in the country's trade policy that came with trade liberalisation and the reintegration of the South African economy into the global economy. As Figure 2.2 reveals, a clear indication of the recovery of South Africa's trade openness was witnessed by levels of trade openness exceeding 40% being recorded from around 1994. Moreover, as the figure shows, by 1998, South Africa's trade openness had risen to 50.16%, up from the 42.99% recorded in 1990. Regarding economic growth, Figure 2.2 shows that by 2000, South Africa had experienced an economic growth rate of 4.2% and trade openness of more than 52%.

The new decade starting in 2000 experienced a much better performance in trade openness, as shown in Figure 2.2. Even though South Africa's trade openness had suffered weaker growth towards the end of the 1990s, it picked up in 2000. This improvement in trade openness coincided with a stronger growth in the volume of merchandise exports from the country. As reported by the South African Reserve Bank (1999:18), the strong increase in the volume of merchandise exports experienced between 1999 and 2000 was driven largely by the reform measures that began to improve economic conditions in emerging markets and also by the real depreciation of the rand.

From 2000 onwards, trade openness maintained an upward trend except for the periods 2003-'05 and 2009-'10, during which the rate of trade openness slowed. During the period 2003-'05, although improvements in economic growth were observed, South Africa's trade openness deteriorated. This deterioration in trade openness was driven by high crude oil prices as well as the stronger value of the rand. In 2003, the strong recovery in the external value of the rand caused a strong contraction in South Africa's merchandise exports (South African Reserve Bank, 2004:31). In addition, the share of the mining imports fell considerably in 2003 (South African Reserve Bank, 2003:31). Thus, it is not surprising that trade openness fell to from 63% in 2002 to 53.4% in 2003. Trade openness only started to rise marginally in 2005, when a 2% increase occurred. The period 2009-'10 was characterised by low output levels and low demand for South African exports, a consequence of the global recession. Therefore, it is not surprising that South Africa recorded negative economic growth in 2009, while trade openness also dropped substantially to 55.46%, down from 74.82% recorded in 2008.

Another observation from Figure 2.2 is that the GDP growth rate has fallen considerably in recent years, while the annual average growth rate has remained below 3%. One of the factors that have contributed to the slowdown in South Africa's economic growth in recent years is the ongoing impediments to electricity supply (World Bank, 2015:15). Despite this dismal performance in economic growth rate, trade openness has been improving recently. As the figure shows, since 2000 South Africa's trade openness has remained above 50% and was around 60%. As highlighted by United Nations (2011:344), the improvement in South Africa's trade openness has been attributable to the increasing role of manufacturing exports, which in 2011 accounted for over two-thirds in total exports.

Figure 2.2 Trends in trade openness and economic growth in South Africa (1960-2016)



Constructed from World Bank (2016)

2.6 Trade flows in South Africa

2.6.1 Destination of South Africa's exports, 1974-2012

Table 2.2 in this discussion presents the major destinations of South Africa's exports during the period 1974-2012. During the period under review, the largest share of South African exports was distributed to advanced economies. Among other countries, the advanced economies comprise the countries of the Eurozone, Australia, Hong Kong, and the United States.

Table 2.2 shows that the emerging economies as well as the developing Asian economies have maintained an increasing share of South Africa's exports in the period 1974-2012. With more liberal multilateral agreements relations between South Africa and some emerging economies, it is not surprising that South Africa's exports to those economies have increased fourfold since 1974.

Table 2.2 also reveals the growing role of sub-Saharan Africa as a market for South Africa's exports. According to the World Bank (2014a), sub-Saharan Africa has emerged as the dominant market for South Africa's non-mineral exports, surpassing the European Union and the Organisation for Economic Cooperation and Development (OECD) markets. Table 2.2 confirms this: by 2012, the share of South Africa's exports distributed to sub-Saharan Africa had more than doubled its 1974 value.

Despite the increasing role of sub-Saharan Africa in the distribution of South Africa's exports, it appears overall that South Africa distributes a smaller share of its exports to the sub-Saharan Africa region, compared with the shares distributed to the advanced economies. As the table shows, by 2012, South Africa exported less than 20% of its goods to the sub-Saharan region, whereas it distributed more than 40% to the advanced economies during the same period. Nevertheless, the share of South Africa's exports to the sub-Saharan African region grew by 3.8% from 12.8% in 2004 to 16.6% in 2012. Even though the advanced economies dominate other regions in the distribution of South Africa's exports, Table 2.2 reveals that the share of South Africa's exports to the advanced economies fell by 10.8% from 56.5% in 2004 to 45.7% in 2012. Table 2.2 also reveals that of all the regions, the Middle East and the Western Hemisphere economies have the smallest share of South Africa's exports, with each region receiving less than 4% of South Africa's exports during the reviewed period.

Table 2.2 Percentage distribution of South Africa's exports (1974-2012)

Region	1974	1984	1994	2004	2012
Advanced economies	43.2	43.1	39.7	56.5	45.7
Emerging & developing economies	11.7	10.3	24.7	30.7	44.2
Developing Asia	2.4	4.6	9.8	12.2	19.1
Europe	0.8	0.8	1.0	1.0	1.8
Middle East, N Africa & Pakistan	0.3	0.7	2.3	3.1	3.9
Sub-Saharan Africa	7.6	3.5	9.5	12.8	16.6
Western Hemisphere	0.6	0.7	2.2	1.6	2.7

Compiled from IMF Direction of Trade Statistics Yearbook (various issues). For 1974, I have substituted the values for emerging and developing countries with the values for non-oil developing countries.

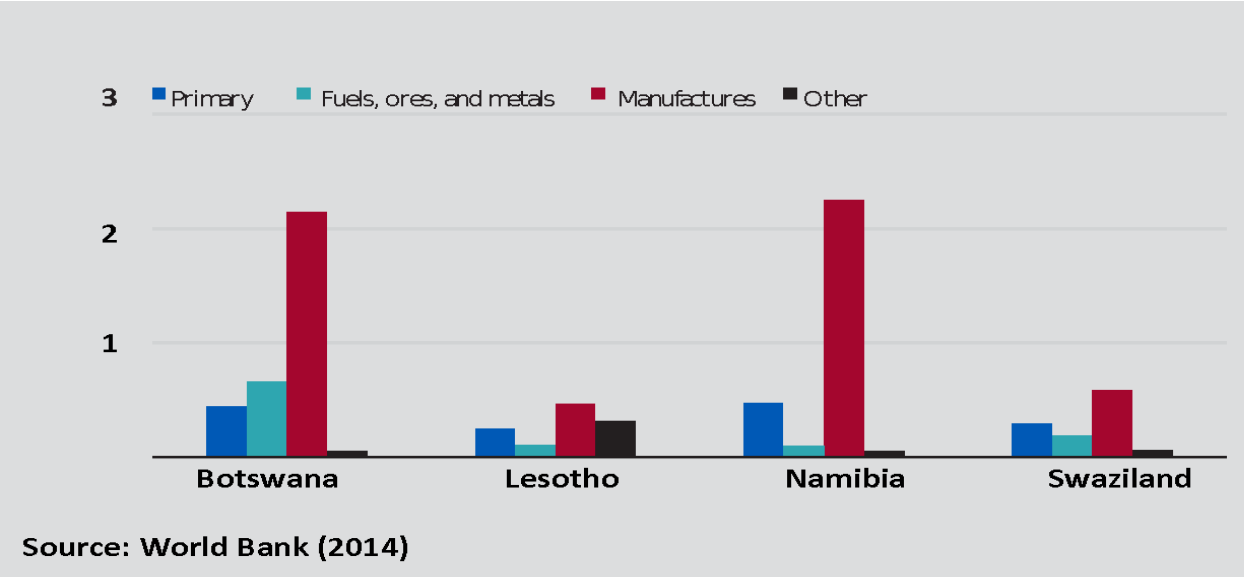
Apart from intra-African trade, the other imperative issue affecting South Africa's international trade is its exports to the South African Customs Union countries. Figure 2.3 shows the recent shares of South Africa's exports to the SACU countries – Botswana, Lesotho, Namibia and Swaziland. The figure shows that Botswana and Namibia are the top destinations for South Africa's exports to the SACU region. As reported by the World Bank (2014a: 28), Botswana and Namibia together account for more than 72% of South Africa's exports to SACU. This finding is consistent with the findings from the SACU annual report (2011:38), according to which during the fiscal year 2008-09, Botswana's share of South Africa's exports to SACU was 40.13%, followed by Namibia with 33.3%, resulting in a joint share of 73.43%. The intra-SACU trade data from the SACU annual report (2011:28) also shows that Lesotho's share of South Africa's exports to SACU was 12.92% while that of Swaziland was 13.65%.

The other revelation from Figure 2.3 is that manufacturing exports dominate South Africa's exports to SACU countries. As indicated in Figure 2.3, Namibia has the highest share of South Africa's manufactured exports to SACU, followed by Botswana. The figure also reveals that during the period reviewed, about $4 billion worth of manufactured exports from South Africa were destined to Botswana and Namibia. On the contrary, about $1 billion worth of manufactured

exports from South Africa were destined to Lesotho and Swaziland, which is four times less than the joint values of South Africa's exports to Botswana and Namibia.

Based on Figure 2.3, it can also be deduced that, compared with the manufacturing exports, South Africa's exports of fuel, ores, and metals account for a much smaller share of South Africa's exports to SACU, followed by the primary exports. The figure also reveals that with the exception of Botswana, South Africa's exports of fuels, ores, and metals destined for Lesotho, Namibia and Swaziland are much smaller compared with the values of South Africa's primary exports going to these countries. It has been indicated by the World Bank (2014a:28) that South Africa's manufacturing exports to SACU account for more than 63% of the total.

Figure 2.3 South Africa's exports to SACU countries, 2011-2012 (billions of US dollars)



Compiled from World Bank (2014)

2.6.3 Sources of South Africa's imports

Table 2.3 present the sources of South Africa's imports for the period 1974-2012. As the table indicates, South Africa imports its goods largely from the advanced economies, with more than 45% of imports originating from there. The share of the advanced economies in South Africa's imports has been declining though, while that of emerging and developing economies has improved considerably since 1974. In about 2012, as the table shows, the emerging and developing economies contributed more than half of the imports to South Africa. It can be further deduced from Table 2.3 that South Africa's imports from the developing Asian economies have shown a substantial improvement from the 3.5% recorded in 1974 to 24.7% in 2012.

The other observation from Table 2.3 is that during the period under review, the sub-Saharan African countries combined contributed less than 10% of South African imports. This indicates that the rate at which the sub-Saharan African region supplies South Africa with imports remains much lower than that which is experienced between South Africa and the advanced and emerging economies. With this observation, the challenge that remains for the rest of the sub-Saharan economies is to find how best they can improve intra-regional trade, particularly with an economically sound partner like South Africa.

Table 2.3 further shows that the share of South Africa's imports from Europe has remained quite low over the reviewed period. The table reveals that generally, South Africa imported less than 3% of its goods from Europe. Also, this share of Europe's imports to South Africa is quite low compared with the shares of South Africa's imports from developing Asia and the Middle East. The other observation is that there is very little importing activity from the Western Hemisphere economies, in that barely 4% of South Africa's imports originate from there. On the other hand, the Middle East economies, including North Africa and Pakistan, have remarkably increased their share in South Africa imports during the period 1974-2012.

Table 2.3 Sources of South Africa's imports (1974-2012)

Region	1974	1984	1994	2004	2012
advanced economies	88.0	75.3	77.1	59.1	47.9
emerging & developing economies	10.7	9.9	16.9	40.5	51.5
developing Asia	3.5	5.1	10.2	18.5	24.7
Europe	0.5	0.3	0.7	2.0	2.2
Middle East, N Africa & Pakistan	0.3	0.6	0.8	12.0	11.5
sub-Saharan Africa	4.9	1.9	2.8	4.2	9.3
Western Hemisphere	1.4	2.1	1.6	3.8	3.9

Compiled from: IMF Direction of Trade Statistics Yearbook (Various issues). For 1974, I have substituted the values for emerging and developing countries with the values for non-oil developing countries.

2.7 Concluding remarks

This chapter focused on various aspects that affect trade openness in South Africa. These aspects include the origins of trade openness in South Africa, trade policy reforms, trade agreements signed by South Africa, trends in trade openness and economic growth, as well as trade flows in South Africa. The main conclusion emerging from the reviewed literature is that South Africa's trade openness has been affected by the different trade policy regimes that the country has gone through.

From about 1925 when South Africa implemented the Customs Tariff and Excise Duty Amendment Act, a need to provide protection to domestic industries came to the fore. At that that point South Africa adopted import substitution industrialisation as a strategy for the economy to operate in. The system of import substitution industrialisation involved the use of protectionist tariffs by which customs duties were levied according to the rates set in the schedule to the Act. While South Africa carried on with import substitution industrialisation, it was evident 20 years later that protectionist tariffs could no longer be used as the main instrument of protection.

The need for a new trade policy shift in South Africa happened at about the end of the Second World War, during which the South African economy experienced massive balance of payments deficits. The authorities then resorted to the use of quantitative restrictions on imports as the main

instrument of protection. After that, the import licensing system was also adopted, which resulted in about 75% of imports to South Africa being subjected to licensing. The main aim of the quantitative restrictions and the import licensing system was to reduce imports into South Africa, with the aim of ultimately reducing the balance of payments deficit.

Notwithstanding these changes in trade policy, it became evident decades later that South Africa needed a policy shift away from import substituting industrialisation. While the country continued with import substitution, new measures to enhance export promotion were adopted in 1972. In response these new measures, South Africa's exports improved in performance, even though sluggishly during the 1980s. Moreover, trade openness was significantly boosted post-1972, reaching a peak of 62.7% in 1980. Though the performance of trade openness was well above 50% during the 1970s and above 40% during the '80s, the overall rate of economic growth was unsatisfactory during the '80s compared with the previous decade. During certain periods of the '80s, GDP growth rate remained below 0% a year, indicating a severe decline in economic activity.

Following this dismal economic performance, the 1990s became the era of a new economic reform in South Africa, during which measures to boost economic growth were put in place. During this reform period, import substitution industrialisation was replaced with an export promotion strategy. The new measures adopted included the phasing out of import surcharges, the conversion of quantitative restrictions, as well as the introduction of the General Exports Incentives Scheme. The post-1990 era also saw South Africa concluding several trade agreements regionally and with other continents. Evidence shows that bilateral trade between South Africa and its regional and overseas trading partners has increased over time. Moreover, in recent years, trade openness in South Africa remains at much higher levels compared with what it was during the 1990s.

CHAPTER 3

TRADE OPENNESS AND ECONOMIC GROWTH IN LESOTHO

3.1 Introduction

This chapter provides a discussion of country-based literature for Lesotho. This chapter comprises seven sections including the introduction. Following the introduction, Section 3.2 discusses the origins of trade openness in Lesotho (previously it had been the Colony of Basutoland). This section reviews the main developments in the overall legislation and other trade-related interventions that have affected trade openness. Section 3.3 discusses trade policy and trade regimes in Lesotho, while Section 3.4 analyses Lesotho's trade agreements. Section 3.5 focuses on an analysis of trade performance, trade openness and economic growth. In Section 3.6, the study analyses Lesotho's trade flows, while Section 3.7 provides concluding remarks.

3.2 The origins of trade openness in Lesotho

The pursuit of external trade dealings has been central to Lesotho, since its independence in 1966. As reported by the World Bank (1975:xviii), shortly after 1966 the government of Lesotho established a Central Planning and Development Office, which was responsible for managing the country's development strategy and future growth prospects. In subsequent years, Lesotho's First Five-Year Development Plan 1970-'71–1974-'75 was introduced as a product of the Central Planning and Development Office. According to the World Bank (1975:xviii), one of the main targets of Lesotho's first five-year development plan was to promote as far as possible productive activities in non-agricultural sectors, particularly small-scale indigenous industries.

Since independence, Lesotho has used development planning as a key instrument for coordinating medium-term development activities in the country (Kingdom of Lesotho, 2001). Apart from development planning, the other intervention Lesotho has used is the Lesotho National Development Corporation (LNDC). It was established in 1967, the year after independence. Since its inception, export-led growth became the key strategy of the LNDC, with emphasis on manufacturing and processing industries WTO (1998b:5). According to the Lesotho National Development Corporation (2000:2), the purpose of LNDC is to initiate, promote and facilitate industries, mining and commerce with a view to raising the level of income and employment in Lesotho. The dealings of the LNDC have been closely related to initiatives that help the country attract more investment on the one hand, and to open up the country to more trade on the other. In its long-term vision, the Lesotho National Development Corporation (2001:3) indicated that the

corporation sought to achieve phenomenal growth in export volumes and earnings, with the intention of turning the industrial sector into Lesotho's growth engine.

To achieve its goals, the Lesotho National Development Corporation created various structures within which to operate. As pointed out by the Lesotho National Development Corporation (2001: 13), one of the structures established within the LNDC is the investment promotion programme, which focuses on labour-intensive sub-sectors including clothing and textile, footwear and leather, and electronic and electrical assembly. There are various activities carried out by LNDC so as to meet the investment promotion target. According to the Lesotho National Development Corporation (2010: 9), the corporation's investment promotion activities include presentations to potential investors, including the presentations made during the AGOA forum in the US, and the EXPO 2010 forum in Beijing, Shanghai and Zhejiang in China. Subsequently, its investment promotion efforts led successfully to the establishment of four new companies and 607 jobs, as reported by the Lesotho National Development Corporation (2010:9).

Apart from the activities driven by the Lesotho National Development Corporation, there have also been interventions by the Ministry of Trade, Industry and Corporate Marketing. As highlighted by the World Trade Organisation (2009: 165), in 1978, the Ministry of Trade, Industry and Corporate Marketing established the Trade Promotion Unit in Lesotho, with the intention of promoting, coordinating and developing Lesotho's foreign trade. Furthermore, as indicated by the World Trade Organisation (2003:A2-133), the Trade Promotion Unit assists Lesotho's trade sector through the provision of technical assistance to domestic exporters and manufacturers, as well as by facilitating domestic manufacturers and exporters in their participation in trade exhibitions abroad.

During the 2000s, the Government of Lesotho applied further interventions targeted at the trade and investment area. As indicated by the Lesotho National Development Corporation (2002: 15), within the auspices of the Integrated Framework, the government of Lesotho instituted interventions to enhance investment capacity as well as trade capacity. The organisation for the Enhanced Integrated Framework (2014a:1) reported that Lesotho became an Integrated Framework country in 2002 and undertook preparations for a Diagnostic Trade Integration Study (DTIS). As reported by the Enhanced Integrated Framework (2014b:1), in response to the concerns of the least developing countries (LDCs) regarding their integration into the multilateral trading system, the Integrated Framework was established in 1997, and was revamped in 2001 to become the Enhanced Integrated Framework (EIF). According to the Enhanced Integrated

Framework (2013:1), among other things, the EIF provides a framework and tools to the LDCs to maximise the use of trade for development as well as to develop partnerships domestically and internationally.

As revealed by the Enhanced Integrated Framework (2011:x), one of the findings of the Diagnostic Trade Integrated Study (DTIS) for Lesotho was that Lesotho is highly dependent on foreign trade, but also that the country's trade is highly concentrated in a few products and in a few markets. With this background, it is perceived that the integrated framework could possibly assist Lesotho reduce existing impediments to Lesotho's trade. On this issue, the Enhanced Integrated Framework (2011:77) identified two main components that needed further attention to support Lesotho's trade and development: first, the country has to take into consideration the existing donor and agency support. Second, the country must address processes towards broader coordination. There have been achievements in Lesotho resulting from the Enhanced Integrated Framework. As reported by the EIF (2014c: 3), through the EIF programme in Lesotho, an outreach programme to increase awareness of trade was conducted countrywide in September 2013. And through the Diagnostic Trade Integrated Study, the Lesotho government has managed to engage better with development partners to take forward the prioritised national action plans (EIF, 2014c:4).

Apart from the adoption of the Enhanced Integrated Framework in the Lesotho economy, the country introduced new national development strategies during the 2000s, including: Vision 2020, a poverty reduction strategy (PRS), and a growth strategy. Each of these development strategies addresses trade-related issues differently. As indicated by the Central Bank of Lesotho (2004:1), Lesotho's national Vision 2020 was formulated in the year 2000 with the aim of achieving sustainable economic development and growth. As stated in the Kingdom of Lesotho National Vision 2020, the strategic actions targeted at Lesotho's trade include the promotion of competitiveness and diversification in the industrial sector, the strengthening of investment and trade capacity, and the diversification of the export market.

According to the EIF (2002:9), the poverty reduction strategy (PRS) was adopted by the Government of Lesotho in 2004 as a first step towards implementing its Vision 2020. The Lesotho poverty reduction strategy (2004:25) identifies constraints to the country's trade and industry. The strategy stresses that any significant developments in various trade-related agreements could have drastic implications for Lesotho. These agreements include AGOA, the Multi-Fibre Agreement, and the SADC Free Trade Agreement (Kingdom of Lesotho, 2004:25). As a result, in

line with the objectives of the poverty reduction strategy, the Kingdom of Lesotho (2004: 25) recommends the creation of an enabling environment through the formulation and monitoring of policies relevant to, among other things, the role of trade in poverty reduction.

As indicated by the Kingdom of Lesotho (2009:6), after the expiry of the poverty reduction strategy in April 2008, the Government of Lesotho developed an Interim National Development Framework for operation during 2009-'10 and 2010-'11. This Interim National Development Framework served as an operational tool during the period between the expiry of the poverty reduction strategy and the start of the new National Development Plan in 2011-'12. According to the Kingdom of Lesotho (2009:3), one of the objectives of the Interim National Development Framework is to pursue high, shared, sustainable private-sector-led economic growth, which could be achieved by the removal of constraints to private sector investment as well as by the promotion of a friendly, competitive investment climate.

In January 2011 the Government of Lesotho launched a process of preparing the National Strategic Development Plan for the period 2012-'13 to 2016-'17, which served as an implementation strategy for the country's Vision 2020 (International Monetary Fund, 2012a: 1). Among other things, the key strategic objectives of the National Strategic Development Plan 2012-'13–2016-'17 include: enhancing productive capacity and increasing exports, diversifying export markets, as well as improving the promotion of trade and investment (Kingdom of Lesotho, 2012: v).

Alongside the strategic objectives of the National Strategic Development Plan 2012-'13–2016-'17, the Central Bank of Lesotho (2012:4) suggested that Lesotho needed to supplement its small domestic market with an export-oriented strategy. However, enforcing an enhanced export-oriented strategy would mean that several sectoral changes must be implemented in Lesotho. As pointed out by the International Monetary Fund (2012b:86), for Lesotho to take advantage of its opportunities for trade, the country has to increase its productive capacity by removing the binding supply-side constraints that affect the main growth sectors, namely, manufacturing, mining, agriculture and tourism.

3.3 Trade policy and trade regimes in Lesotho

3.3.1 Trade policy in Lesotho

The developments in Lesotho's trade policy reflect the status of the country in terms of its relations with its regional trading partners as well as with the rest of the world. The World Trade Organisation (1998a: ix) indicates that since the Fifth Development Plan which operated from 1990-'91 to 1993-'94, Lesotho's trade policy has turned towards greater export orientation and the promotion of foreign direct investment in resource-based and labour-intensive industries. These developments in Lesotho's trade policy have been reflected in greater levels of trade openness in Lesotho, as measured by the ratio of total trade to GDP. The World Bank (2007:34) confirmed that Lesotho is a highly open economy and that trade has been central to the country's economic success. So, trade policy is critical in Lesotho as a tool to steer the country's external trade towards the achievement of national objectives.

As indicated by the United Nations Conference on Trade and Development (2012: 15), Lesotho has since the 1980s experienced structural change in its trade patterns because of its trade policy. Consequently, improvements in Lesotho's trade sector have been closely linked to developments in the country's trade policy. As highlighted by the United Nations Conference on Trade and Development (2012:15), Lesotho's competitiveness, particularly in the textiles and clothing sub-sectors, has been vitally shaped by the two trade policy instruments – quotas imposed under the Multi-Fibre Arrangement (MFA), and the quota-free, duty-free access to the United States granted under the AGOA initiative.

There are elements in Lesotho's trade policy which have varying effects on imports and exports. An element of this trade policy that affects imports is the use of import permits. As indicated by the World Trade Organisation (2009:160), all goods imported into Lesotho from outside the SACU area require import permits and are also subjected to customs control. Moreover, in the case of Lesotho, like is the case in other SACU countries, the tariffs are largely influenced by SACU, so that imports from outside the SACU area are subjected to external tariffs (World Trade Organisation, 1998: ix). Overall, Lesotho's import tariffs range between 0% and 45% (The International Trade Administration, 2011:1). Moreover, the World Bank (2010:1) indicates that in the non-agricultural sector, Lesotho's average most favoured nation (MFN) applied tariff is set at 7.5%, while tariff protection in the agricultural sector is set at 9.4%. The World Bank further states that Lesotho's tariff system remains complex, comprising *ad valorem*, specific, mixed, compound and formula duties based on reference prices (World Bank, 2007:34).

In consideration to the elements of trade policy that affect exports, there are two broad requirements that apply. The World Trade Organisation (2009:165) has indicated that, firstly, Lesotho's exports need to be registered in accordance to the Export and Import Control Act (Act No 16 of 1984). Secondly, in certain cases, such those of some livestock and livestock products, export controls are applied. The other aspect of Lesotho's trade policy relates to the assistance offered to domestic exporters through the Export Finance and Insurance Scheme. As highlighted by the International Monetary Fund (2006:31), the Export Finance Scheme aims to ameliorate financial obstacles faced by Lesotho's exporters and to diversify the country's export base.

During the past two decades, there have been marked developments in Lesotho's trade policy across different sectors. The World Trade Organisation (1998b:9) reports that since 1996, Lesotho has liberalised its agricultural sector, achieved mainly through two steps: the removal of quantitative restrictions on whole grain, and the removal of the distortions caused by price fixing. This development in Lesotho's agriculture sector resulted in a gradual shift away from a highly regulated, inward-looking strategy towards a liberalised, outward-looking strategy, as indicated by the World Trade Organisation (2009:174). Also, the Southern African Development Community (2002:65) indicates that Lesotho no longer uses import controls, although the government may stipulate their use for statistical purposes.

It can be argued that the existing trade policy developments in Lesotho's manufacturing sector have been aided by the economic reform programmes adopted. As revealed by the World Trade Organisation (1998b:11), the adoption of Lesotho's export and growth strategy has brought with it various elements that have shaped trade policy in the trade and industry sector. These elements include the diversification of export products and markets, the removal of trade distortions, and the preserving and maintaining of external competitiveness.

3.3.2 Trade regimes in Lesotho

Lesotho's trade administrations are closely linked to its associations with other trading partners in the region, particularly in the South African Customs Union area. As indicated by the World Trade Organisation (2009:153), most of Lesotho's trade policies have been shaped by the SACU Agreement. However, Lesotho's Ministry of Trade and Industry, Cooperatives and Marketing is the main custodian for the formulation of the country's trade policy. Table 3.1 below presents trade-related legislation in Lesotho from 1951 to 2009. Among other things, the legislation covered in the table includes Acts governing import and export controls, trade and development, and customs matters.

As shown in Table 3.1, until 1967 most of the legislation formulated in Lesotho did not cover imports and exports directly. It is shown in the table that import and export controls were introduced only in 1967. The Lesotho National Development Corporation, also formed in 1967, later became one of the major means of assistance to trade and industry in Lesotho. Table 3.1 also reveals that during the 1970s, the major trade-related legislation targeted specific agricultural produce, including the preparation of sunflowers, as well as cereal and legumes. Apart from the legislation on import and export controls in 1975, there was not much in the way of interventions affecting exports and imports directly.

The 1980s were characterised with legislation affecting customs-related matters as well as import and export controls. However, it can be argued that during the 1980s not much was covered in relation to economic restructuring. This came only in 1995 when the Privatisation Act was formulated. With privatisation came Lesotho's economic restructuring as the country began phasing out state ownership of enterprises.

Table 3.1 Sequencing of trade-related legislations in Lesotho (1951-2009)

Year	Policy intervention	Target area
1951	Proclamation 45: Fishing regulations	health and sanitary regulations
1952	Proclamation 57: Importation of livestock and livestock products	health and sanitary regulations
1954	Stock Diseases Proclamation (amendment)	health and sanitary regulations
1965	Act 4 of 1965; and financial regulations for the Central Tender Board	government procurement
1967	Agricultural Marketing Act	import and export controls
1967	Lesotho National Development Corporation Act	trade and development
1967	Mining Rights Act	mining and mineral operations
1970	Precious Stones Order	mining and mineral operations
1972	Export Control Regulations (cereals and legumes)	import and export controls

1973	Stock Diseases Regulations	health and sanitary regulations
1975	Aviation Act	air transport services
1975	Export Control Regulations (sunflower preparation)	import and export controls
1976	Building Finance and Insurance Act; and Insurance Act	financial services
1981	Road Transport Act and Regulations	road transport services
1982	Customs and Excise Act No 10 of 1982	customs matters
1984	Customs and Excise Regulations	customs matters
1984	Customs and Excise (Amendment) Act	customs matters
1984	Export and Import Control Act	import and export controls
1984	Stock Diseases (Amendment) Act	health and sanitary regulations
1985	Act to Provide Protection to Agricultural Plants from Damage by Pests and Diseases	health and sanitary regulations
1989	Industrial Property Order; and Copyright Order	intellectual property rights
1989	Money Lenders Order	financial services
1990	Lesotho National Development Corporation Order	trade and development
1992	Agricultural Marketing Regulations	health and sanitary regulations
1995	Privatisation Act	privatisation
1995	Sales Tax Act	sales tax
1997	Privatisation regulations	privatisation
1999	Financial Institutions Act	financial services
2000	Central Bank of Lesotho Act	financial services
2000	Lesotho Telecommunications Act	telecommunication services
2000	Notes of the Chief Veterinary Officer	health and sanitary regulations
2001	Road Transport Amendment Act	road transport services

2001	Value-Added Tax Act (VAT) Act	value-added tax
2002	Tourism Act	tourism services

Compiled from WTO (2009)

Table 3.2 presents trade regimes in Lesotho, starting with the period of national independence in 1966, to 2009. Following its independence, Lesotho had to adopt a strategy for development. According to WTO (1998b:5), the initial industrial development strategy that Lesotho adopted was biased towards import substitution. As Table 3.2 shows, there were protective measures put in place as instruments of import substitution. As shown in Table 3.2, these measures were restrictive towards imports. Based on information in Table 3.2, it can be argued that the establishment of the Lesotho National Corporation (LNDC) in 1967 brought a different dimension to Lesotho's initial industrial strategy. As the table shows, the LNDC targeted export-led growth, which is in contrast with import substitution strategy. Later, in 1978, the country established the Trade Promotion Unit as a facility to assist exporters.

During the 1980s, there were no major changes in state intervention except towards the end of the decade when the Structural Adjustment Programmes were introduced. In the same year, the Lesotho National Development Corporation introduced the Export Finance Scheme so as to assist exporters with export finance. It can be argued however that during the 1970s and '80s, trade-related interventions in Lesotho did not address trade integration adequately. It was with the adoption of the Sixth National Plan in 1996 that trade integration was more pronounced. Table 3.2 reveals that the 1990s and most of the 2000s witnessed the signing of more trade agreements with countries in sub-Saharan Africa, Europe and North America. Therefore, it can be argued that over the past two decades, interventions in Lesotho's trade sector mostly related to the creation of freer markets within which Lesotho can trade, through the implementation of trade agreements.

Apart from fostering trade partnerships, Table 3.2 shows that since the mid-'90s, Lesotho has taken measures to open the economy through liberalising its major sectors, diversifying export markets, and creating an enabling environment to encourage increased private sector participation in the economy.

Table 3.2 Sequencing of trade policy interventions in Lesotho (1966-2016)

Year	Intervention	Comments
1966	adoption of import substitution strategy	import controls, price fixing in agriculture sector, quantitative restrictions
1967	establishment of the Lesotho National Development Corporation	initiation, promotion and facilitation of development of manufacturing and processing, mining and commerce; adoption of export-led growth as key strategy
1969	inception of the 1969 SACU Agreement	application of customs and excise duties, and other related measures and laws set by South Africa
1974	setting up of the Multi Fibre Agreement (MFA)	quota agreements and restrictions on clothing and textiles products between developing and developed countries
1978	establishment of the Trade Promotion Unit	promotion, coordination and development of exports; provision of technical assistance and advice to exporters
1988	introduction of the Export Finance Scheme	assistance to exporters with access to credit
1988	implementation of Structural Adjustment Programmes, supported by the International Monetary Fund.	shaping of the practices affecting export and import flows
1996	adoption of the Sixth National Development Plan	emphasis on deepening regional economic integration; emphasis on expansion of markets and better access to capital markets in the region
1996	liberalisation of the agriculture sector	liberalisation of price of whole maize and wheat; removal of

		quantitative restrictions on importation of maize and wheat
1997	undertaking of the “Red Tape Analysis”	review of the major administrative barriers to investment; review of the Companies Act of 1967; reduction in the import and export licensing system
2000	formulation of Vision 2020	collaboration with other countries in trade, investment, and economic advancement; strengthening Lesotho’s investment and trade promotion capacity; diversification of export markets
2000	implementation of Economic Reform Programme: Interim Poverty Reduction Strategy Paper (IPRSP)	adoption of export-led growth strategy; adoption of export promotion as key element of trade policy
2000	signing of the Africa Growth and Opportunity Act (AGOA)	duty-free access granted to Lesotho’s exports of clothing to the US market
2000	implementation of SADC Free Trade Protocol	elimination of barriers to intra-SADC trade; elimination of import duties; elimination of non-tariff barriers; phasing out of existing quantitative restrictions on imports
2000	Signing of the Cotonou Agreement	non-reciprocal trade preferences to most imports originating from ACP countries, subject to a safeguard clause and rules of origin
2001	Signing of the EBA initiative	duty-free access to the EU market
2001	New Export Finance and Insurance Scheme	assistance with export finance; provision of loan guarantee fund
2002	implementation of the 2002 SACU Agreement	introduction of new system of managing and sharing of the

		common revenue pool; general liberalisation of markets; conversion of non-tariff barriers; phased reduction of import tariffs
1995	commencement of privatisation and economic restructuring	phasing out of government subsidies and state control of commercial enterprises; creation of enabling environment for increased private sector participation
2004	signing of SACU-MERCOSUR preferential trade agreement	provision of tariff preferences for selected goods; diversification of market opportunities
2005	phasing-out of the Multi-Fibre Agreement (MFA)	see comment for "MFA"
2008	implementation of SACU-EFTA	provision of trade preferences; promotion of trade between EFTA and SACU member states
2008	signing of the SACU Trade, Investment and Development Cooperation Agreement (TIDCA) with the US.	expansion and diversification of trade between SACU and the United States; promotion of attractive investment climate
2009	signing of the Economic Partnership Agreement with the European Community	enhanced access for Lesotho's exports into major markets
2015	launching of the CFTA negotiations	creation of a single continental market
2015	launching of the COMESA-EAC-SADC FTA	promotion of accelerated economic integration
2016	signing of the EU-SADC EPA	duty-free access for Lesotho's products to the EU

Compiled from WTO (1998b), (2003) and (2009); IMF (2006); Kingdom of Lesotho Vision 2020; SACU (2003a) and (2011); SADC (1996); European Commission (2016); East African Commission (online)

3.4 Trade agreements signed by Lesotho

Over the years, Lesotho has been a beneficiary of different trade agreements. Being a signatory to these trade agreements has made it possible for Lesotho to access several markets around the globe. As highlighted by Riley (2010:3), through these trade arrangements, Lesotho enjoys preferential access to markets in Southern Africa, Europe and the United States. Lesotho's export-led development strategy involves the use of trade preference arrangements, which are widely used by the country (USAID, 2008). The trade agreements that Lesotho is involved in are at multilateral and unilateral levels, regional level and bilateral level.

For several years, Lesotho has been a signatory to the World Trade Organisation (WTO), which has led to changes in the country's trade development. For instance, following the commitment made under the WTO Marrakesh Round in 1995, Lesotho has since 1997 liberalised the marketing of its agricultural products and has also undertaken reforms in trade and agricultural sectors (Lesotho's Ministry of Development and Planning, 2000: 16). These reforms are discussed in Section 2.3 of this study.

Apart from the abovementioned effects that come with Lesotho's WTO membership, Lesotho enjoys unilateral preferences with various advanced economies in the European Union under the Generalised System of Preferences. As reported by the United Nations Conference on Trade and Development (2008: 3), in 1968 the first United Nations Conference on Trade and Development recommended the creation of a generalised system of tariff preferences under which industrialised countries would grant autonomous unilateral trade preferences to all developing countries. The African Growth and Opportunity Act (AGOA) is another unilateral trade arrangement from which Lesotho has benefited in the past decade. AGOA has proved to be playing a bigger role in Lesotho's exports to the United States in a notable way. Lesotho has benefited substantially under AGOA, witnessed by about one third of Lesotho's total exports being categorised as AGOA exports in 2001 (SADC, 2002:62). And as reported by Williams (2013:10), among all the qualifying sub-Saharan African countries, Lesotho was counted No 2 out of the top five exporters of non-energy products to the United States under AGOA in 2012, with exports of apparel amounting to $301 million. Even though in 2012, the AGOA imports were 35% less than in the previous year, Lesotho was counted among the leading AGOA beneficiaries, with the country's total exports to the United States amounting to $310.57 million (United States Department of Commerce, 2013: 3). Further evidence shows that during the period January to June 2016, Lesotho's garments exports to the United States amounted to about $132 million, which is above the $121 million for the same period in 2015 (Setipa, 2016).

Also, through its membership to the Southern African Development Community (SADC), Lesotho is obliged by the SADC Free Trade Area Protocol to remove import restrictions on products originating from the SADC region. One of the latest developments in SADC that has important implications for Lesotho's trade is the SADC-EU EPA, which was signed in 2016. The SADC-EU EPA is discussed in Section 2.4 of this study.

In addition to SADC, over the years, Lesotho's membership to the Southern African Customs Union (SACU) has been commendable. It can be contended that SACU has had a substantial influence on Lesotho's trade and trade-related issues. For instance, more than 90% of Lesotho's imports came from SACU in 1998 (WTO, 1998a: viii). Even in subsequent years, SACU has remained one of Lesotho's major trading partners. Through its membership of SACU, Lesotho has been influenced to apply reductions in its tariffs on imports from the rest of the world. Because of the country's tariff reductions, Lesotho's tariffs could be regarded as being much lower compared with tariffs in other countries in the region. For instance, in 2009, Lesotho's Most Favoured Nation (MFN) tariff of 7.8% remained well below that of an average sub-Saharan African country, which stood at 12.5% at that time (World Bank, 2009: 1). Apart from its influence on tariffs, the other effect of SACU in Lesotho relates to the role of SACU customs revenue, which has served as one of the major sources of government revenue in the country (see SACU, 2016).

3.5 Trends in performance of exports and imports, trade openness and economic growth

The discussion in this section covers the performance of exports and imports in Lesotho, as well as the performance of trade openness and economic growth between 1960 and 2015. The discussion first focuses on the shares of exports and imports in GDP, followed by an analysis of the trend in export and import growth rates during the period reviewed. The discussion in the last part of this section concludes with an exploration of the trends in trade openness and economic growth in Lesotho.

3.5.1 Performance of exports and imports in Lesotho

Figure 3.1 shows Lesotho's percentage shares of exports and imports in GDP during the period 1960-2015. The following key observations emerge from the figure: First, during the reviewed period, the share of exports in GDP remained considerably below the share of imports in GDP. Second, for most periods particularly before 1988, the share of exports in GDP was below 20%. Third, except for 1961 during which the share of imports in GDP was 38.46%, the share of imports in GDP remained above 40% throughout.

Several socio-economic factors are responsible for the observed trends in Lesotho's external trade. During the 1960s, for instance, Lesotho's domestic economy relied largely on livestock farming and crop cultivation. However, credit and marketing facilities impeded the advancement of Lesotho's agricultural sector (Africa Institute, 1966:6). Looking at the trends depicted in Figure 3.1, there is an indication that Lesotho's exports share in GDP during the 1960s and most of the '70s increased marginally. As the figure shows, Lesotho's exports share in GDP began to pick up only after the mid-'90s. By 1995, the share of exports in GDP had doubled to 22.45% from its initial value of 11.74%, recorded in 1960 (World Bank, 2014b).

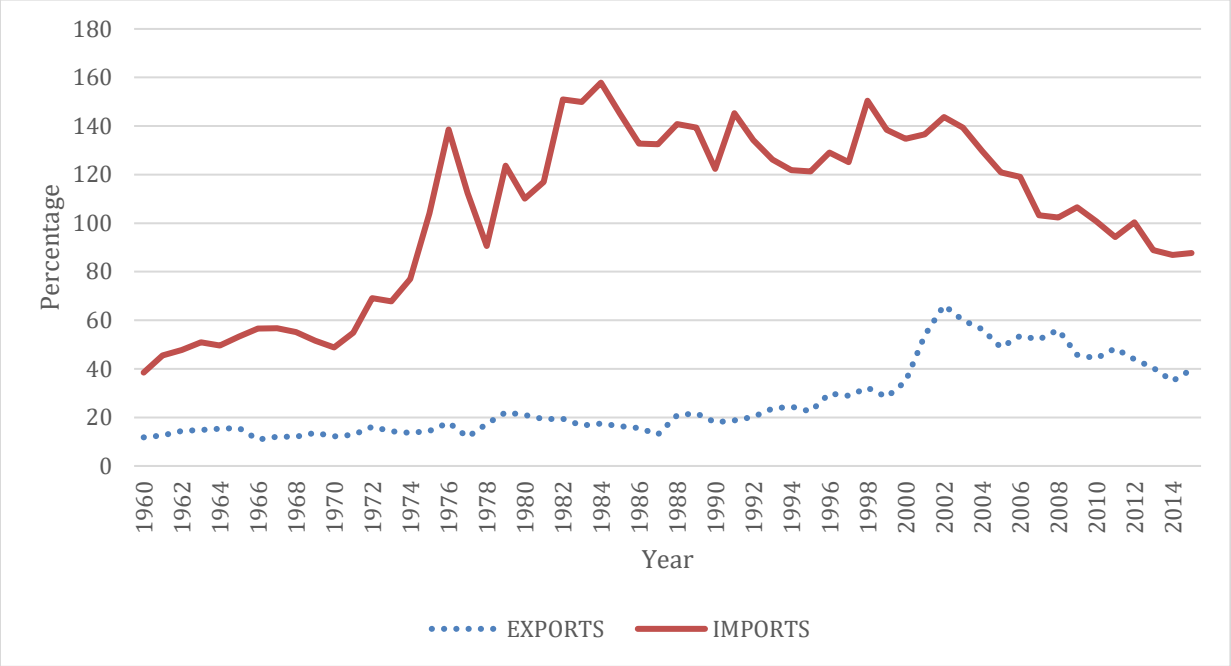
Notably, the share of Lesotho's exports in GDP has never reached the same heights as that of imports in GDP. Nevertheless, there has been an improvement in the country's share of exports in GDP since 2000, as revealed in Figure 3.1. This improvement was witnessed by a record high of 66.17% in 2002. Some of the improvements in the share of Lesotho's exports in GDP during the early 2000s corresponded with the introduction of the Africa Growth and Opportunities Act (AGOA). As highlighted by the World Bank (2007:31), since 2001, AGOA has provided further opportunities for expansion in Lesotho, particularly in the manufacturing sector. Despite the improvements in the share of Lesotho's exports in GDP, the country experienced a decline in the share of exports in GDP between 2003 and '06, and again after 2008, signalling a contraction in the demand for Lesotho's exports. By 2012, the share of exports in GDP had fallen considerably from 66.12% in 2002 to 48.91% as Figure 3.1 shows. Since then, the share of exports to GDP has been falling as demonstrated in the figure. In 2015, the share of exports to GDP stood at 39.76% (World Bank, 2016).

Looking at the trends in Lesotho's imports share, Figure 3.1 reveals an insignificant growth in the share of imports in GDP during the 1960s, which is followed by an upward trend from the early 1970s. As the figure shows, the highest share of imports in GDP was recorded in 1976, which corresponded with a greater intensity in manufactured imports to the country. In about 1976, Lesotho's imports comprised mainly manufactured goods, indicating a strong orientation of Lesotho's economy towards imported manufactured goods at that time (Barclays Bank International, 1978:31). Figure 3.1 demonstrates that during the 1980s, a robust growth in the share of imports to GDP occurred in Lesotho, which by far surpassed the share of exports in GDP during the same period.

Another revelation from Figure 3.1 is that while the share of imports to GDP fluctuated most of the time, after 1998, a steady decline in the share of imports to GDP was evident. By 2015, the

share of imports in GDP had decreased to 87.74% compared to where it was around 2010. (World Bank, 2016).

Figure 3.1 Lesotho's exports and imports as percentage of GDP (1960-2015)



Constructed from World Bank (2016)

Figure 3.2 presents the growth rates of exports and imports in Lesotho from 1960 to 2015. As the figure shows, during the 1960s and most of the ’70s, Lesotho’s exports grew at a slower rate than imports. As can be seen from Figure 2.2, during the ’70s the highest growth rate in imports was 42.48% observed in 1971, while the lowest recorded import growth rate was -3.53% in ’69. And, as shown in Figure 3.2, between 1960 and ’77, the highest growth rate in exports was 35.48% recorded in 1976, while the lowest export growth rate was -30.59% observed in ’66. As highlighted by The Economist Intelligence Unit (1986:50), Lesotho’s export growth was particularly rapid after 1977 because of the Letseng mine.

The period approaching the end of the 1970s resulted in a dramatic recovery in Lesotho’s exports, during which exports grew from 0.69% in 1977 to 126.67 in 1978 percent as revealed in Figure 3.2. This surge in export growth was, however, followed by a steep decline in export growth in subsequent years. As shown in Figure 3.2, the continued decline in Lesotho’s exports experienced in the beginning of the 1980s resulted in a record low of -10.51% in 1982. Figure 3.2 also shows that during the two decades from 1980 to 2000, the growth of Lesotho’s exports

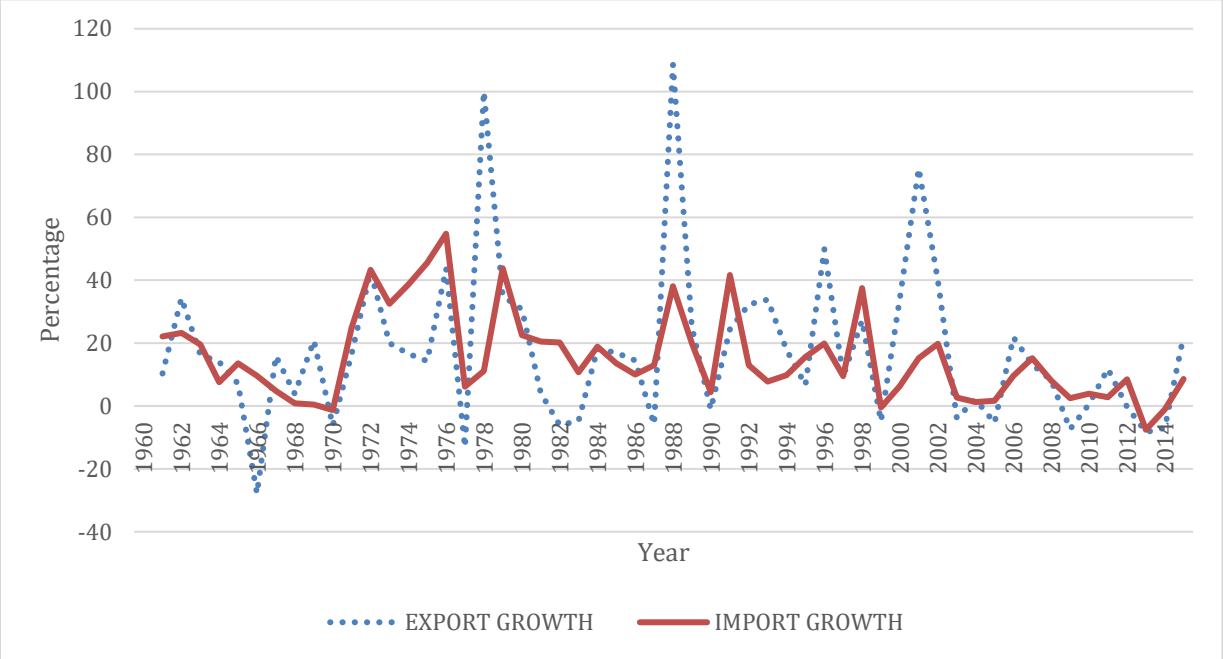
fluctuated considerably, although growth rates never went as low as they had done in previous decades. The highest export growth rate recorded during this period was in 1987, when 50.53% was observed as can be seen from Figure 2.2 below. During the same 20-year period, the highest growth rate in imports was also recorded in 1987, when imports rose to 10.7% as shown in Figure 3.2.

As can be seen from Figure 3.2, the early 1990s, particularly after 1992, were associated with increases in Lesotho's exports. As reported by The Economist Intelligence Unit (1996:30), in the '90s Lesotho recorded a current account surplus, accompanied by a 7% rise in exports in 1994. It should be noted that the increase in Lesotho's exports during the early 1990s corresponded with the rise in the country's manufactured exports. Since 1986, due to the setting up of new export-oriented industries in Lesotho, the value of manufactured exports has risen, resulting in a rapid increase in exports (EIU, 1991).

The period beginning the decade of the 2000s experienced significant expansion in the growth of Lesotho's exports, which exceeded the growth of imports by far at that time, as shown in Figure 3.2. Part of the increase in Lesotho's exports since the beginning of the 2000s corresponded with the introduction of the Africa Growth and Opportunity Act (AGOA), which led to an expansion in manufactured exports. Figure 3.2 reveals that from 2000 until 2005, Lesotho's export growth ranged between 5.46% and 38.04%. By contrast, Lesotho's imports growth ranged between -0.61% and 8% during the same period.

In recent years, Lesotho's exports growth has been declining, reaching levels lower than 10% as shown in Figure 3.2. The figure shows that in 2012, exports grew by 5.58%, 29.54 percentage points less than the 35.12% growth of 2002. The recent continued decline in Lesotho's exports is attributed to several factors. One of the contributing factors is the decline in the performance of the clothing and textiles sector. Most importantly, the performance of Lesotho's clothing and textiles has been in a progressive decline since 2005, partly due to the expiry of the Multi-Fibre Agreement (Central Bank of Lesotho, 2012). As revealed in Figure 3.2, Lesotho's imports, too, have been declining in recent years. In 2015, Lesotho's imports grew by only 2.78% (World Bank, 2016).

Figure 3.2 The growth of exports and imports in Lesotho (1960-2015)



Constructed from World Bank (2016)

3.5.2 Performance of trade openness and economic growth in Lesotho

Figure 3.3 presents the trends in trade openness and economic growth in Lesotho during the period 1960-2015. As the figure shows, Lesotho's trade openness, as measured by the ratio of trade to GDP, started to increase from 50.2% in 1960 to 65.15% in 1969, after which it fell to 61.1% in 1970. The overall observation depicted in Figure 3.3 is that during the 10-year period between 1960 and '70, Lesotho's trade openness did not remain below 50%. As Figure 3.3 shows, since 1970, trade openness has been increasing, with a high of 156.5% reached in 1976. This was the highest level of trade openness reached by the country before the 1980s, as shown in the figure. Nevertheless, Figure 3.3 reveals that the striking performance in Lesotho's trade performance could not be maintained subsequently, as it fell by 30 percentage points to 124.3% in 1977, followed by a further 16.5-percentage-point decrease to 107.85% in 1978. However, as shown in the figure below, by 1979 trade openness had improved in performance to 145.72%.

Considering the trend in economic growth, Figure 3.3 shows that Lesotho's GDP growth was quite unstable during the 1960s and '70s. As shown in Figure 3.3, starting from 1.86% growth in 1961, Lesotho's GDP growth reached its highest level during that decade in 1962, when 15.3% growth was recorded. However, as revealed in Figure 3.3, from 1963, Lesotho's GDP growth started to decline from 10.6% to 8.25% in 1964, followed by 2.15% in 1965. As the figure shows, in 1966

Lesotho's GDP growth reached its lowest level for the decade, with a record low of -0.4% observed that year. The remarkable revelation from Figure 2.3 is that after the steep decline in Lesotho's economic growth, a significant recovery in economic growth occurred in 1967, in which the country's GDP grew by 10.91%. Despite this huge recovery in Lesotho's economic growth, a further negative growth rate was recorded in 1968 when the country's GDP grew by -0.37%, as shown in Figure 3.3. In the same period, the country's trade openness had risen by only 1% (World Bank, 2014b).

The beginning of the 1980s was marked by a reduction in Lesotho's trade openness, in which trade openness fell by 14.6% from 145.7% in 1979 to 131. 1% in 1980 as depicted in Figure 3.3. Likewise, as shown in the figure, Lesotho's GDP growth fell from 2.89% in 1979 to -2.74% in 1980. However, by 1982, trade openness had risen to 170.42% while GDP had increased to 2.56%. Apart from 1987, during which a 0% growth rate was recorded, Figure 3.3 also shows fewer fluctuations in Lesotho's economic growth during the 1980s in comparison with the previous decade. And although the growth rates were not as high as they were during the 1970s, the rate of economic growth during the period 1980-'89 was relatively stable, as revealed in Figure 3.3. Part of the improvement in the performance and stability of Lesotho's economic growth came because of structural developments. After the introduction of the Structural Adjustment in 1988, Lesotho's macroeconomic environment became favourable (Central Bank of Lesotho, 2005: 1).

Despite the improvements in the Lesotho's overall macroeconomic environment following the Structural Adjustment Programmes, the 1980s were marked with slower rates of economic growth in Lesotho relative to the overall GDP growth rate in sub-Saharan Africa. Part of this slow growth in Lesotho's GDP growth was due to poor domestic policy, which had created an unstable macroeconomic environment in the country (Petersson, 2001: 249).

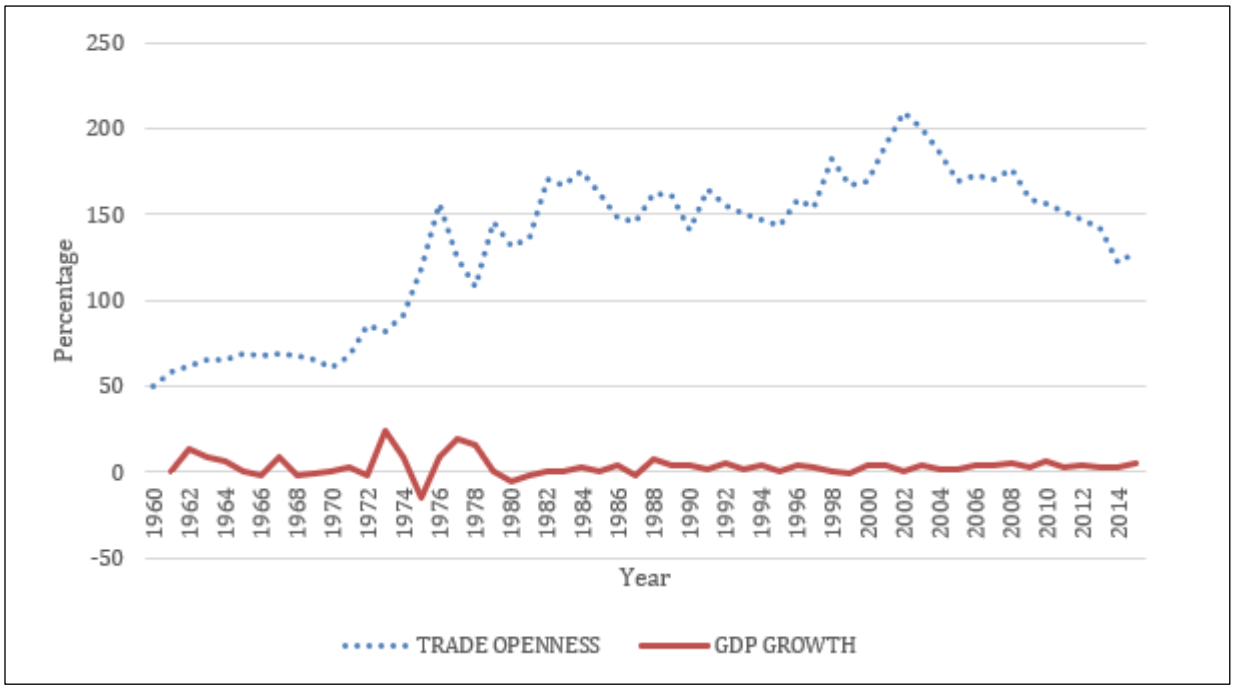
During the 1990s, Lesotho's real GDP growth recovered, without any record of negative growth rates, as revealed in Figure 3.3. A number of factors contributed to this recovery of real GDP growth in Lesotho, which include: the International Monetary Fund/World Bank Structural Adjustment Programme, developments in fiscal policy, high levels of private foreign investment in the Lesotho Highland Water Project, and the efforts from export-oriented manufacturing (Kingdom of Lesotho, 2000: 6). In contrast, the trend in Lesotho's trade openness in the beginning of the 1990s depicts a slump, particularly between 1992 and '95. However, towards the end of the 1990s, trade openness had improved, with 182.6% recorded in 1998 as revealed in Figure 3.3. Nevertheless, this improvement in trade openness in 1998 coexisted with a significant decline in

economic growth, from 4.1% to 1.7% (World Bank, 2014b). The contraction in economic growth in 1998 in Lesotho had resulted from civil and political unrest (Kingdom of Lesotho, 2000:xiv).

In the early 2000s, an upward trend in Lesotho's trade openness was observed as shown in Figure 3.3. Lesotho's trade openness reached its highest level of 209.87% in 2002 (World Bank, 2014b). However, this impressive performance in trade openness did not last beyond a couple of years, as this figure began to fall to 199.43% in 2003 to 169.74% in 2005, as shown in Figure 3.3. This revelation points to the fact that that by mid-2000s, Lesotho's trade openness had fallen by 40 percentage points from its peak value of 2002. The slowdown in Lesotho's trade openness in the mid-2000s corresponded to the decline in the contribution of manufacturing to GDP at that time. In 2005, the contribution of Lesotho's manufacturing to GDP declined from its peak of 16.2% recorded in 2004 (Central Bank of Lesotho, 2005:1). Even though some slight increases in trade openness were noted from 2006, as can be seen from Figure 3.3, the year 2009 experienced another sharp decline in trade openness. With reference to Figure 2.3, this decline was reflected by an 18-percentage-point decline in trade openness from 176.55% in 2008 to 158.71% in 2009.

Regarding the trends in Lesotho's economic growth during the past decade to the present, Figure 3.3 shows that except for 2002, during which 0.53% growth was recorded, between 2000 and 2012, Lesotho's economic growth ranked between 2.29% and 7.09%. As indicated by the Central Bank of Lesotho (2003:9), in 2003, Lesotho's economic growth slowed down mainly due to lower growth in the manufacturing and construction sectors. The Central Bank of Lesotho (2004: 8) revealed that although the was a slight increase in economic growth in 2004, the slowdown in the manufacturing sector extended to 2004, when 5.2% growth was recorded against the 5.2% growth observed in the previous year. Another slowdown in economic growth was experienced between 2008 and '09. According to the World Bank (2011:5), Lesotho's economic growth slowed from 4.7% in 2008 to 2.5% in 2009 due to reduced demand for diamond and textile exports. However, there was a recovery in economic growth during 2010. As Figure 2.3 shows, by 2013, Lesotho's economic growth rate was 5.9%, but this was down from the 6.5% recorded in 2012. It can be argued that this contraction in economic growth reflected the contraction in economic activity at that time. According to the Central Bank of Lesotho (2013: 12), the decline in Lesotho's economic growth during 2013 was due to the subdued performance in the main sectors – the primary and tertiary sectors.

Figure 3.3 Trade openness and economic growth in Lesotho (1960-2015)



Constructed from World Bank (2016)

3.6 Trade flows in Lesotho

3.6.1 Composition and destinations of Lesotho's exports

Table 3.3 presents the composition of Lesotho's main export products for the years 1983 and in 1993. As the table shows, in 1983, Lesotho's principal exports were dominated by agriculture sector products, namely mohair and wool, followed by diamonds from the mining sector. This observation shows that at that time, Lesotho's exports were predominantly from the primary sector. And as revealed in the table, in 1983, more than a third of Lesotho's exports were from the primary sector.

However, down the years, Lesotho's primary sector no longer served as the major source of export products. As pointed by The Economist Intelligence Unit (1991: 58), Lesotho's exports, once dominated by diamonds, wool and mohair, changed to be led by manufactured goods. This fact is confirmed in Table 3.3, in which manufactured products are shown to dominate Lesotho's exports in 1993. As revealed in the table, in 1993, manufactured products accounted for almost 80% in the exports. There was also a shift towards capital goods in the composition of the country's top exports. As shown in Table 3.3, by 1993, all products associated with machinery, transport and equipment accounted for about 6% in the total exports.

Table 3.3 Lesotho's principal exports (1983 and 1993)

Year	Product	US$ millions
1983	mohair	6
	wool	5
	diamonds	1
	Total including others	**30**
1993	manufactures	107
	food and live animals	8
	machinery, transport and equipment	8
	crude materials	5
	Total including others	**134**

Compiled from The Economist Intelligence Unit (1987) and (1996)

Table 3.4 presents Lesotho's main destinations of exports in 1982 and '93. One key fact about Lesotho's exports is its reliance on South Africa, which has been one of the main destinations for the country's exports. As the table shows, in 1982, 42% of Lesotho's exports were destined for South Africa. The rest of the country's exports were destined mostly for countries in Europe, which collectively accounted for over 50% of Lesotho's (EIU, 1987). Taiwan, the only Asian country on the list, accounted for 4% of Lesotho's exports.

Comparing the 1980s with the '90s, Table 3.3 reveals that the destinations of Lesotho's exports have changed dramatically over the years. In 1993, South African Customs Union countries became the top export destination for Lesotho, with a 45.8% share of Lesotho's exports as shown in Table 3.4. The 1990s also witnessed a greater role for North America in becoming one of Lesotho's significant export markets. Table 3.4 shows that in 1993, North America was the second top export destination for Lesotho, with a 33.5% share. In recent years, Lesotho's direction of trade has again changed, with a decreased dependence on the SACU as the main market for the

country's products, which has resulted in SACU's share of Lesotho's exports falling from over 80% in the 1980s to just about 60% in the '90s (WTO,1998b:11).

Table 3.4 Lesotho's main export destinations (1982 and 1993)

Year	Destination	% of total
1982	South Africa	42
	Switzerland	39
	West Germany	10
	Taiwan	4
	United Kingdom	3
1993	South African Customs Union	45.8
	North America	33.5
	European Union	18.2

Compiled from The Economist Intelligence Unit (1987) and (1996)

Table 3.5 presents the composition of Lesotho's top 10 export products as well as the major destinations of Lesotho's exports in 2009. As the table shows, most of Lesotho's exports are products of the manufacturing sector, which account for more than 80% of Lesotho's top exports as shown in Table 3.5. As the table shows, mining is the largest contributing sector in top exports, with 10.9% of the top 10 exports. Evidence from Table 3.4 also shows that exports from the agriculture sector are relatively small compared with the manufacturing and mining sectors. As shown in the table, during the reviewed period, agriculture accounted for only 0.7% of the top 10 exports, which is far less than the export shares of other sectors. All these observations indicate that Lesotho's exports are highly concentrated in two sectors, manufacturing and mining.

While manufacturing sector products dominate Lesotho's exports, it is specifically the exports of the apparel and clothing sub-sectors that contribute the most. Table 3.5 shows that in 2009, in the top manufactured products, articles of apparel and clothing accessories contributed the largest share of 82%, while other manufactured products like beverages and footwear contributed

barely 1%. Part of this trend in the composition of Lesotho's exports can be linked to the trade privileges associated with the manufacturing sector.

Apart from the composition of Lesotho's top 10 export products, Table 3.5 shows various destinations for these exports. As the table shows, in 2009 the United States was Lesotho's top export destination, accounting for over three-quarters of Lesotho's exports. Again, this significant US share can be linked to the role of the AGOA, which granted duty-free access to textiles and clothing exports, among others. Throughout the period 2001-'09, almost all exports from Lesotho to the Unites States fell under the textiles and apparel category in the AGOA concessions (UNCTAD, 2012b:19). Lesotho's other main export destinations outside Africa, Belgium and the United Kingdom, are also members of the European Union. As shown in Table 3.5, these two countries import mostly manufactured products from Lesotho. In 2009, Belgium accounted for a large share of 97.54% in the exports of non-metallic mineral manufactures, while the United Kingdom accounted for a 2.51% share of Lesotho's exports of footwear.

It is also shown in Table 3.5 that in 2009, South Africa was the top destination for Lesotho's exports among other sub-Saharan African countries, particularly in exports of textile yarns; beverages, and telecommunications and sound recording apparatus. Apart from South Africa, Botswana is the other sub-Saharan African country that ranked among Lesotho's top 10 export destinations in 2009, although with just a 0.2% share of total exports.

Table 3.5 Composition and destinations of Lesotho's top 10 export products (2009)

Rank	Product	Share (%)	Destinations	Share (%)
1	articles of apparel & clothing accessories	**82.0**	United States	94.89
			South Africa	2.07
			Canada	1.81
2	non-metallic mineral manufactures	**10.9**	Belgium	97.54
			South Africa	2.46
3	textile yarn and related products	**2.5**	United States	83.17
			Canada	11.70

			South Africa	2.81
4	beverages	**1.2**	South Africa	100.00
5	footwear	**0.9**	South Africa	94.21
			United Kingdom	2.51
6	cereals and cereal preparations	**0.7**	South Africa	93.32
7	telecommunications and sound recording apparatus	**0.7**	South Africa	100.00
8	textile fibres and their wastes	**0.2**	South Africa	99.97
9	medicinal & pharmaceutical products	**0.2**	Botswana	91.15
			South Africa	8.84
10	animal oils and fats	**0.1**	South Africa	99.98

Compiled from UNCTAD (2012b)

3.6.2 Composition of Lesotho's imports and their major suppliers

The composition of Lesotho's main import products has evolved over the years. In 1983, manufactured goods, followed by food items and capital goods, ranked among Lesotho's principal imports. At that time, manufactured imports alone accounted for about 45% in total imports in 1983 (EIU, 1987). On the other hand, food, drink and tobacco accounted for 21%, while the share of capital goods was 17%. This points out to the importance of manufactured imports in Lesotho during the early 1980s.

However, by 1995, manufactured goods had ceased to dominate Lesotho's imports. At that time, Lesotho had moved towards more importation of capital goods, food, fuel and energy (EIU, 1996 and 2000). The table reveals that in 1995, capital goods dominated Lesotho's principal imports with a 32% share of total imports. As can be seen from the table, this figure is 25% up from the share of capital goods in imports recorded in 1983. Table 3.5 also shows an increasing role for imports from the mining sector, namely fuel and energy. In 1995, the imports of fuel and energy accounted for 18% in Lesotho's total imports, as Table 3.6 shows. Table 3.6 presents Lesotho's main import products in 1982 and 1995.

Table 3.6 Lesotho's principal imports (1982 and 1995)

Year	Product	US$ millions
1982	manufactured goods	237
	food, drink and tobacco	108
	capital goods	88
	Total including others	**524**
1995	capital goods	368
	food	328
	fuel and energy	216
	Total including others	**1,168**

Compiled from The Economist Intelligence Unit (1987; 1996; 2000)

Regarding the main origins of Lesotho's imports, the South African Customs Union (SACU) has been the major supplier of Lesotho's imports, with a 97% share in 1982 as shown in Table 3.8. This is an indication that during the early 1980s, nearly all of Lesotho's imports originated from SACU. Table 3.7 also reveals that the United Kingdom and other European Community countries formed part of the main origins of Lesotho's imports in 1982. Interestingly, no other countries from other regions or continents featured in Lesotho's main origins of imports in 1982.

In 1993, Asian countries had also become one of Lesotho's main sources of imports, joining the South African Customs Union (SACU) and the European Union. The Asian countries ranked second in Lesotho's list of main origins of imports for the year 1993, with a 11.5% share (EIU, 1996). By contrast, the European Union countries accounted for only 2.8%, a slight improvement from the 1982 value. Like in 1982, SACU countries continued to be the top origins of Lesotho's imports in 1993, accounting for 82.9% in total imports (EIU, 1996). However, compared with 1982, this value of SACU's share in Lesotho's imports was 14.1%, down as Table 3.7 shows. Nevertheless, SACU continues to play a significant role in Lesotho's international trade. For instance, according to Lesotho's Ministry of Development Planning and Development (2000:7), over 80% of Lesotho's imports are from SACU. Table 3.7 presents the main origins of Lesotho's imports during 1982 and '93.

Table 3.7 Lesotho's main origins of imports (1982 and 1993)

Year	Destination	% of total
1982	South African Customs Union	97
	United Kingdom	1
	other European Community	1
1993	South African Customs Union	82.9
	Asia	11.5
	European Union	2.8

Compiled from The Economist Intelligence Unit (1987) and (1996)

In terms of Lesotho's top 10 import products and their major suppliers, Table 3.8 provides a snap-shot for 2009. The table reveals that during the period reviewed, products from the manufacturing sector accounted for a larger share in Lesotho's imports. Of these manufactured imports, 28.5% comprised textile yarn and related products as shown in Table 3.8. As can be seen from Table 3.8, these imports of textile yarn and related products were supplied by countries from Asia, namely, India, China and Korea. Among these Asian importers, China was the dominant supplier of textile yarn and related products, with 81.5% of imports originating from there.

Table 3.8 further shows the role of China as Lesotho's major supplier of imports of various products. As shown in Table 3.8, of the listed top 10 import products, China appeared seven times in the list. Korea is another significant supplier of Lesotho's imports. Except for textile yarn and related products, Korea supplied almost 70% in each of the products it supplied to Lesotho, as Table 3.8 shows. The other observation from the table is that Zimbabwe and Zambia are the only sub-Saharan countries that appeared in Lesotho's top 10 import suppliers in 2009. Compared with Zambia, Zimbabwe contributed a larger share, 91.5%, in the imports of textile fibres and their wastes. On the other hand, as shown in Table 3.8, Zambia's share in Lesotho's imports was relatively small, with only 1.4% originating from there.

Table 3.8 Lesotho's top 10 imports with top suppliers (2009)

Rank	Product	Share (%)	Destinations	Share (%)
1	textile yarn and related products	**28.5**	China	81.5
			India	7.4
			Korea	6.5
2	telecommunications and sound recording apparatus	**8.7**	Korea	69.9
			China	28.6
			Indonesia	0.8
3	cereals and cereal preparations	**7.6**	United States	38.7
			Zimbabwe	35.7
			India	13.9
4	textile fibres and their wastes	**7.4**	Zimbabwe	91.1
			United Kingdom	5.2
			Zambia	1.4
			United States	0.6
5	manufactures of metal	**5.9**	Korea	68.8
			China	28.2
			Indonesia	1.8
6	miscellaneous manufactured articles	**5.4**	China	61.0
7	iron and steel	**3.3**	Korea	79.8
			United States	10.3
			China	8.9
8	specialised machinery	**3.1**	Germany	27.9
			China	36.7

			United States	14.6
9	articles of apparel & clothing accessories	**1.3**	China	67.9
			Korea	12.5
			Zimbabwe	6.9
			Pakistan	4.2
10	other industrial machinery and parts	**1.1**	Germany	30.7
			China	29.4
			Belgium	17.2

Source: UNCTAD (2012b). Note: China includes Taiwan Province and Hong Kong SAR.

3.6.3 Trends in intra-SACU trade

Table 3.9 presents the growth in intra-SACU imports for the period 2002-'03 to 2012-'13 based on the annual percentage change. The table shows that during the three-year period 2002-'03 to 2005-'06, South Africa had the highest intra-SACU imports growth rate of 24%, followed by Namibia with 5.3%, and Lesotho with 1.7%. Compared with their SACU counterparts, Botswana and Swaziland recorded negative average growth during the same period (SACU, 2008). However, by 2006-'07, Botswana's intra-SACU imports had increased by 8% compared with the average growth recorded during 2002-'03–2005-'06.

With regard to Lesotho, Table 3.8 reveals that its intra-SACU imports increased significantly during 2006-'07, it being the country with the highest growth rate in the intra-SACU imports in that year. The table also reveals that South Africa and Swaziland recorded the lowest growth rates in intra-SACU imports during 2006-'07. However, in 2007-'08, the growth of Lesotho's intra-SACU imports contracted, as reflected in the negative growth rate in that fiscal year. In the subsequent period covering 2008-'09 to 2010-'11, Lesotho's intra-SACU imports growth recovered, indicating an increase in the country's imports from SACU. During the same period, Namibia dominated other SACU members with the highest intra-SACU imports growth rates, particularly in 2008-'09 and 2010-'11. Based on Table 3.9, there a general indication that the intra-SACU imports have increased quite significantly lately compared to the previous years.

Table 3.9 Annual percentage change in intra-SACU imports (2002-2013)

	2002-'03 – 2005-'06	2006-'07	2007-'08	2008-'09	2009-'10	2010-'11	2012-'13
Botswana	-0.6	8.0	38.5	26.3	6.5	2.8	22.7
Lesotho	1.7	13.6	-4.1	10.8	5.2	4.3	13.7
Namibia	5.3	13.2	33.6	14.4	0.9	12.7	34.8
S Africa	24.0	1.3	8.6	0.3	11.4	5.1	13.3
Swaziland	-5.0	-4.4	-9.6	17.3	26.5	1.9	22.7

Source: SACU Annual Report (various issues)

3.7 Concluding remarks

This chapter focused on different reviews relating to trade openness in Lesotho. The topics reviewed in the chapter include the origins of trade openness in Lesotho, trade policy and trade regimes in Lesotho, Lesotho's trade agreements, trade performance and trends in trade openness and economic growth. From the literature reviewed, several conclusions present themselves.

Following independence in 1966, Lesotho had to adopt a strategy for industrial development. Influenced by the need to protect domestic industry, particularly agriculture, manufacturing and processing, the country adopted import substitution industrialisation as the strategy for industrial development. This resulted in the imposition of quantitative restrictions on selected imports as well as the application of import controls. Tariffs, which until the present are largely influenced by the South African Customs Union, also formed part of the instruments of trade protection.

The Lesotho National Development Corporation, which introduced export-led growth as its key strategy, presented Lesotho with a different approach to industrial development. In later years, export assistance was introduced through the Export Finance Scheme with the aim of providing loan guarantees as well as aiding with diversification of the country's exports. From the early 1990s, structural and economic reforms that came through the Structural Adjustment Programmes, Development Planning and other strategic interventions helped shape the country's trade policy. The conclusion of various trade agreements at regional and multilateral levels has

also facilitated in opening the country's trade through reductions in tariffs and also through providing Lesotho's exports with increased market access.

While various developments have been realised in Lesotho's trade, particularly in the past two decades, there are problems facing the country's trade, which could in the long run affect the extent of trade openness in the country. One of these problems relates to the marked declines in the performance of trade in recent years. Exports of textiles and clothing have been slowing down since 2005. Among other factors, this slowdown in Lesotho's exports has been associated with the expiry of the Multi-Fibre Agreement. There is also the problem of Lesotho's heavy reliance on manufactured exports, which are volatile depending on global economic conditions.

There have also been changes in Lesotho's major trade partners over the years. Influenced by the Africa Growth and Opportunity Act (AGOA), the United States has become Lesotho's major export partner in recent years, replacing the South African Customs Union. The other aspect is that in the sub-Saharan region, South Africa continues to be the main supplier of Lesotho's imports. This is not surprising given the geographical location of Lesotho in which the country is surrounded by South Africa. However, there are still avenues to be explored by Lesotho that could reduce the country's heavy reliance on South Africa for imports. Given that regionally, Lesotho is a member of the South African Customs Union (SACU) and the Southern Africa Development Community (SADC), Lesotho needs to make wider use of other countries in the region as well.

CHAPTER 4

TRADE OPENNESS AND ECONOMIC GROWTH IN BOTSWANA

4.1 Introduction

This chapter reviews key issues concerning trade openness and economic growth in Botswana. The chapter is organised into seven sections including the introduction. Following the introduction, Section 4.2 discusses the origins of trade openness in Botswana, while Section 4.3 analyses Botswana's trade policy regimes. Section 4.4 discusses Botswana's trade agreements. This is followed by a discussion on trends in performance, trade flows and economic growth in Sections 4.5 and 4.6. Section 4.7 provides concluding remarks.

4.2 The origins of trade openness in Botswana

Since its independence in 1966, Botswana has not ceased to pursue trade-related interventions that assist the country's broader economic objectives. The focus of the key strategies for Botswana's economic objectives has changed over the years, as reflected in the country's industrial policy path. As highlighted by Botswana's Ministry of Trade and Industry (2014:8), in 1984, Botswana adopted import substitution industrialisation through its first Industrial Development Policy that operated from 1984 to '98. The limitation of this industrial development policy is that it focused mainly on industrial production for the domestic market. However, since 1998 Botswana has switched to the adoption of export-led growth as the key strategy for the economy. As indicated by the Ministry of Trade and Industry (2014:9), Botswana's export-led growth targets not only the domestic market, but the export market as well.

With an emerging desire to achieve export-led growth, Botswana has taken steps to show its commitment to the new strategy for growth and development. The Government of Botswana is committed to promoting diversification of its economy through export-led industrialisation (World Trade Organisation, 1998). In line with this commitment, the government has, since 1997, developed new policy frameworks to assist in achieving the country's trade and investment goals, particularly in respect of diversifying the production base. Botswana's key trade-supportive policies and legislation include the National Development Plan (NDP 10), Industrial Development Policy and Competition Policy, Botswana's National Export Strategy, Investment Strategy for Botswana, and the Private Sector Development Strategy (Ministry of Trade and Industry, 2009).

The adoption of the National Development Plan, together with the implementation of Botswana's Vision 2016, has assisted in addressing the key issues relating to the diversification of Botswana's economy (OECD, 2008). Among other things, Vision 2016 emphasises that there is an emerging

need for the country to address the removal of restrictive regulations, further liberalisation of exchange controls, low inflation, a stable exchange rate and incentives for saving and investment (Botswana Vision 2016:22). Apart from Botswana's Vision 2016, the National Development Plan (NDP) 10 was launched in 2009 to operate during the years 2009-'10 to 2015-'16. The NDP 10 reinforces the objectives of Botswana's Vision 2016. Fundamentally, the strategic thrust of the NDP 10 is to accelerate diversification and competitiveness of Botswana's economy, which the country has achieved through the coordination of productive and knowledgeable human resources; the enhancement of environmentally sustainable growth and social protection; and the upholding of good governance (African Development Bank, 2009:9).

In addition to the National Development Plan 10 and Vision 2016, Botswana's trade policy itself highlights the key areas associated to the country's trade openness. The key guiding principles of Botswana's trade policy include export-led growth, export diversification, economic diversification, market access, and integration into the global economy (Ministry of Trade and Industry, 2009:6). The key strategic considerations outlined in the National Trade Policy for Botswana also cover the effective negotiation of trade agreements, tariff-based measures, non-tariff measures, trade development, and trade in services.

To strengthen the achievement of economic diversification, Botswana has in recent years adopted the Economic Diversification Drive for implementation from 2011 to '16. The Economic Diversification Drive aims mainly to achieve economic diversification through the promotion of priority sector development, business linkages, export promotion and development, as well as investment promotion (Ministry of Trade and Industry, 2011). Another intervention closely related to the Economic Diversification Drive is the Private Sector Development Strategy, which emphasises the creation of a favourable environment for private sector development and growth. With a view to stimulating the development and growth of the private sector, the Private Sector Development Strategy proposes ways of reducing the costs of doing business, as well as to facilitate access to markets (Ministry of Trade and Industry, 2014:14).

Over and above economic diversification and private sector development, Botswana's trade openness has also been influenced by increased policy effectiveness. During 2013, the Mid-Term Review of National Development Plan 10 (NDP 10) was carried out to identify issues that needed critical attention during the second phase of NDP 10. In that review, attention was given to efficient resource allocation and increased policy effectiveness. In addition, macroeconomic stability,

increased global competitiveness, as well as governance and factor productivity became part of the latest strategies articulated (Ministry of Finance and Development Planning, 2013).

4.3 Trade policy and trade regimes in Botswana

4.3.1 Trade policy in Botswana

Botswana's trade policy forms an integral part of the country's economic development objectives. Included among Botswana's trade policy objectives is the adoption of measures to assist in diversifying the economy from heavy reliance on a limited number of exports of primary products as the main source of national income. In 2009, the National Trade Policy for Botswana was created in line with the country's desire to achieve increased industrialisation, deeper diversification and development of exports, as well as enhanced global competitiveness. So Botswana's trade policy reflects a further attempt by the government to address the country's strengths and inherent problems (Ministry of Trade and Industry, 2009). These include dependence on a limited number of commodity exports and a few export markets, a small industrial base and a relatively small market. As indicated by the World Trade Organisation (2003a:7), having recognised the need to diversify its economy, the Government of Botswana has since the mid-1980s continued to promote sustainable diversification of the economy through various policies and programmes.

Apart from the adoption of policies and programmes that assist in the diversification of the economy, Botswana has also committed itself to the process of trade liberalisation (World Trade Organisation 1998a). Botswana's commitment to liberalising its trade can be linked to the country's commitment to broader economic partnerships, particularly the World Trade Organisation (WTO). In addition to this, all the South African Customs Union countries (including Botswana), have indicated their support for further trade liberalisation based on their WTO commitments (World Trade Organisation, 2003b).

To achieve its commitment to trade liberalisation, Botswana has adopted within its country strategies various instruments to operate with. As indicated by the African Development Bank (2009:9), Botswana's main instrument for trade liberalisation has been the elimination of tariffs on intra-SADC trade. This conforms to the SADC Trade Protocol which, among other things, stresses the importance of eliminating the barriers to intra-SADC trade (SADC, 1996:11). In addition to the elimination of tariffs, Botswana has identified the elements that form the core of its trade policy. These include tariff-based measures, taxes and duty drawbacks, as well as non-tariff measures (Ministry of Trade and Industry, 2009).

In addition to the goal of achieving more liberal trade, the main objectives of Botswana's trade policy also cover ways of accessing international markets and opening the domestic market up to imports. In this regard, Botswana's trade policy has been influenced by the country's desire to maintain a relatively open economy, which dates as far back as the inception of the South African Customs Union Agreement in 1910 (World Trade Organisation, 2003c). Therefore, it is not surprising that within its trade policy, Botswana's key guiding principles include economic diversification and market access.

The key instruments in Botswana's trade policy in general are tariff-based measures (Ministry of Trade and Industry, 2009: 9). However, because of being a member of SACU, there are other measures that affect Botswana's trade policy. Among other things, Botswana applies SACU's common external tariffs and excise duties, exemptions and rebates, and other contingency trade remedies (World Trade Organisation, 2009).

Botswana also uses non-tariff-based measures as additional instruments of its trade policy. As indicated by the World Trade Organisation (2003:70), non-tariff measures that affect imports into Botswana include licensing, registration and import prohibitions, as well as standards and other technical requirements. Botswana's trade policy also incorporates measures that affect exports. According to the World Trade Organisation (2009:91), Botswana's exports are subject to registration, taxes and export prohibitions, as well as restrictions and licensing. Botswana also offers export credit insurance through the Botswana Export Credit Insurance Guarantee Company.

Based on this discussion, it can be concluded that the developments in Botswana's trade policy are in conformity with the country's intention of achieving an open and well-diversified economy. In support of the broader national objectives, there have been notable changes in Botswana's trade policy, particularly in the tariff-based instruments of trade policy. One of the highlights was the reduction in restrictions imposed through tariff-based measures, especially in the manufacturing sector where significant reductions in tariffs and in corporate taxes have been introduced over the past two decades.

4.3.2 Trade regimes in Botswana

Botswana's trade regimes have been influenced by the country's membership of regional trade blocs. According to the World Trade Organisation (2009:74), even though Botswana's Ministry of Trade and Industry is responsible for the formulation and implementation of trade policy, Botswana's trade policy instruments are determined at regional level mostly by the SACU

Agreement. Table 4.1 presents Botswana's main trade-related legislation during the period 1971-2008. As shown in the table, Botswana's main trade-related legislation covers various aspects including agriculture, services, and imports and exports. The table shows that most of the legislation formulated from the 1970s through the '90s covered services, electricity, and agriculture and registration procedures. As shown in Table 4.1, it was only in 1997 that the Export Development and Development Authority Act was introduced. Furthermore, the table shows that most of the legislation directly regulating imports and imports was formulated during the 2000s. It can be argued that since 2001, the legislature has addressed trade more than was the case in previous decades.

Table 4.1 Sequencing of trade-related interventions in Botswana (1966-2009)

Year	Legislation	Area
1971	Botswana Power Corporations Act, 1971	electricity
1974	Botswana Agricultural Marketing Board Act, 1974	agriculture
1987	Insurance Industry Act, 1987	services
1989	Cooperative Societies Act, 1989	registration procedures
1992	Tourism Act, 1992	services
1995	Banking Act, 1995	services
1995	Standards Act, 1995	standards
1996	Tourism Regulations, 1996	services
1997	Botswana Export Development and Investment Authority Act, 1997	foreign investment
1999	Mines and Minerals Act, 1999	mining
2001	Public Procurement and Asset Disposal Act, 2001	government procurement
2001	Customs and Excise Act, and 2001 amendments and regulations	imports and exports
2003	Trade Act, 2003; Liquor Act, 2003	

2003	Companies Act, 2003	registration procedures
2004	Customs and Excise Act, Amendment Act 31, 2004; Customs and Excise Duty Regulations SI 127, 2004; Botswana Unified Revenue Act, 2004; Export and Import of Rough Diamonds Regulations, 2004	imports and exports
2004	Branding (Amendment) Regulations, 2004; Grading of Carcasses (Amendment) Regulations, 2004; Hides and Skins Export Act (CAP 49:01), Hides and Skins (Amendment), Regulations, 2004	agriculture
2004	Telecommunications (Amendment) Bill, 2004	services
2005	International Insurance Act, 2005	services
2006	Weights and Measures Act and Regulations, 2006	standards
2006	Public Procurement and Asset Disposal Regulation, 2006	government procurement
2008	Trade Regulations, 2008	imports and exports
2008	Standards (Import Inspection) Regulations, 2008	standards
..	Industrial Property Act CAP 68:03; Copyright and Neighbouring Rights Act (CAP 68:02)	intellectual property
..	Control of Goods, Prices and Other Charges Act (CAP 63:08)	price controls

Source: WTO (2009)

Botswana's trade regimes and policy interventions are presented in Table 4.2. As the table indicates, Botswana's trade regimes have evolved from its initial import substitution industrialisation to the current export-led growth strategy. Import substitution industrialisation lasted until 1998 when an export-led strategy was introduced. It can be argued that following the adoption of the national Vision 2016 in 1996, Botswana's trade regime drastically changed its focus from inward orientation to the world outside. As shown in Table 4.2, one of the outward-oriented frameworks adopted in the new trade regime is the Industrial Development Policy, which put emphasis on export-led growth as a key strategy for industrialisation.

Since the adoption of the export-led growth strategy in 1998, more policy frameworks were developed that targeted freer trade, diversification of the economy and entrepreneurial development, as shown in Table 4.2. The table shows that during the mid-1990s, policy interventions in the form of reductions in corporate taxes were also introduced in the Botswana economy, and in an even more pronounced manner in the manufacturing sector. In the light of these developments in Botswana's trade regimes, the indication is that the policy interventions undertaken in Botswana's trade sector indicate the country's seriousness about its export-led strategy. Also, given the trade agreements Botswana has signed regionally and in other continents, there are prospects for a further expansion and diversification of Botswana's trade, which could likely result in increased trade openness.

Table 4.2 Sequencing of trade regimes and policy interventions in Botswana (1984-2016)

Year	Intervention	Measures adopted
1984	Industrial Development Policy	adoption of import substitution industrialisation
1995	commencement of privatisation and economic restructuring	phasing out of government subsidies and state control of commercial enterprises; creation of enabling environment for increased private sector participation
1995	reductions in Corporate Taxes	corporate taxes reduced from 35% to 25%; and to 15% in manufacturing
1996	Vision 2016	definition of a broad trade policy framework for the country
1998	Industrial Development Policy	adoption of export-led growth strategy; creation of a favourable environment for private development
2000	signing of the Africa Growth and Opportunity Act (AGOA)	duty-free access granted to Botswana's exports of clothing to the United States market
2000	implementation of SADC Free Trade Protocol	elimination of barriers to intra-SADC trade; elimination of import duties; elimination of non-tariff barriers; phasing out

		of existing quantitative restrictions on imports
2001	New Export Finance and Insurance Scheme	assistance with export finance; provision of loan guarantee fund
2004	signing of SACU-MERCOSUR preferential trade agreement	provision of tariff preferences for selected goods; diversification of market opportunities
2008	Competition Policy for Botswana	creation of a free and fair trade environment
2008	implementation of SACU-EFTA	provision of trade preferences; promotion of trade between EFTA and SACU member states
2008	signing of the SACU Trade, Investment and Development Cooperation Agreement (TIDCA) with the US	expansion and diversification of trade between SACU and the US; promotion of attractive investment climate
2009	signing of the Economic Partnership Agreement with the European Community	enhanced access for Botswana's exports into major markets
2009	National Trade Policy for Botswana	statement, guidelines and legislation governing the conduct of trade in Botswana
2009	National Development Plan 10	accelerating the diversification of the economy through human resource development, infrastructure and utilities; agriculture and environment; and governance
2010	National Export Strategy (NES)	assistance to Botswana firms to develop export competencies, access financial resources and gain market information
2010	Investment Strategy for Botswana	creation of a favourable environment for both domestic and foreign firms

2010	National Export Strategy for Botswana	expansion of Botswana's levels of exports and diversification of the country's export base
2011	Economic Diversification Drive	promotion of domestic production
2011	Private Sector Development Strategy	development of a vibrant and globally competitive private sector
2011	Special Economic Zones Policy	diversification of both the economic and export base of Botswana into sustainable sectors
2012	Citizenship Economic Empowerment Policy	strengthening citizens' ability to own, manage and control resources
2012	Cooperatives Transformation Strategy	development of competitive and profitable industries
2014	Industrial Development Policy	development of industries with strong emphasis on exports
2014	Entrepreneurship Development Policy for Botswana	development of an entrepreneurship culture through acquisition of skills
2015	launching of the CFTA negotiations	creation of a single continental market
2015	launching of the COMESA-EAC-SADC FTA	promotion of accelerated economic integration
2016	signing of the EU-SADC EPA	duty-free access to the EU

Compiled from African Development Bank (2009); Ministry of Trade and Industry (2009); Ministry of Trade and Industry (2011); Ministry of Trade and Industry (2014); Valentine (2013); WTO (1998). European Commission (2016); East African Commission (online)

4.4 Trade agreements signed by Botswana

This section discusses the various trade agreements Botswana has signed, both in sub-Saharan Africa and in other regions outside Africa. The World Trade Organisation (WTO) is one of the trade agreements Botswana has signed at a multilateral level. Apart from the WTO, the Generalised System of Preferences (GSP) is another trade agreement to which Botswana is a beneficiary. Under the GSP, eligible products from Botswana are granted preferential access to these markets: Australia, Canada, the European Community, Japan, New Zealand, Norway, Switzerland and the United States (World Trade Organisation, 2009).

In addition, in 2000, Botswana became a signatory to the African Growth and Opportunity Act (AGOA). Under AGOA, Botswana's exports of textiles, apparel and furniture are provided with enhanced access to the US market (World Trade Organisation, 2009). In sub-Saharan Africa, Botswana is a member of the South African Customs Union (SACU), and a member to the Southern African Development Community. Botswana (previously Bechuanaland Protectorate) has been a member of the South African Customs Union since 1910. As is the case in other SACU countries, Botswana's tariff policy is governed by the SACU agreement, with common customs and excise duties on goods imported from other countries (World Trade Organisation, 1998). Other important trade agreements for Botswana include the EU-SADC EPA, the COMESA-EAC-SADC FTA, and the SACU-MERCOSUR preferential trade agreement. Apart from these agreements, in sub-Saharan Africa, Botswana has had bilateral trade agreements with Malawi since 1956 and with Zimbabwe since 1988 (World Trade Organisation, 2009). These bilateral agreements aim at facilitating trade between Botswana and those two countries.

4.5 Trends in performance of exports and imports, trade openness and economic growth

The discussion in this section looks at the performance of exports and imports in Botswana, and the performance of trade openness and economic growth for the period 1960-2015. The discussion starts with an analysis of trends in the shares of exports and imports in GDP. This is followed by an analysis of the trends in growth rates of exports and imports. The last part of this section focuses on trends in trade openness and economic growth in Botswana.

4.5.1 Performance of exports and imports in Botswana (1960-2015)

The performance of Botswana's trade as indicated by the shares of exports and imports in GDP has changed down the years. There have been upturns and downturns in the performances of exports and imports in GDP. Botswana's share of exports in GDP experienced an improvement during the first half of the 1960s, after which it plummeted. The decline in the share of exports to

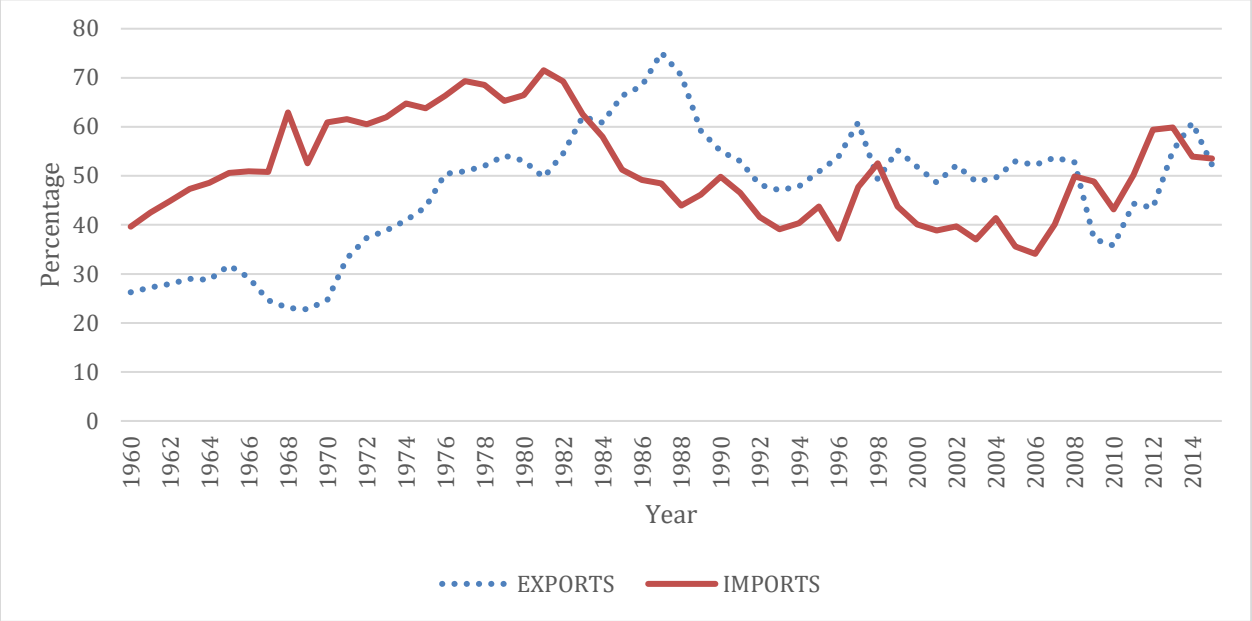
GDP continued until the early 1970s, during which there was an increase from 23.7% in 1970 to 33.1% in 1971. Following a recovery in the share of export to GDP during the ’70s, a downward trend in the country’s exports occurred in the early 1980’s as shown in Figure 4.1. One of the explanations for this trend is Botswana’s 1981 economic recession, which resulted in a decline in the country’s diamond exports (see Gaolathe, 1997:37). After that, the share of exports in GDP increased steadily through to the 1980s. By 1987, the share of exports to GDP had reached its peak at 75.1% as shown in Figure 4.1.

Despite the notable performance of exports experienced in the 1980s, towards the end of that decade, the share of exports in GDP fell considerably. This decline persisted until the mid-’90s. Between 1989 and ’94, the share of exports in GDP had declined by 22.7 percentage points from 70.5% to 47.8%. From 2000 to ’08, there was a modest growth in the share of exports in Botswana’s GDP. After that, the share of exports in GDP fell drastically from 52.7% in 2008 to 37.1% in 2009. During this period there was a global economic crisis. There have been improvements in the performance of the share of exports to GDP since then. In 2013, the share of exports in GDP was 55.1%, 11.6 percentage points higher than in the previous year. By 2015, Botswana’s share of exports in GDP stood at 52% as shown in Figure 4.1.

Botswana’s share of imports in GDP grew continuously during the 1960s, the ’70s and most of the ’80s. The ’60s evidenced a peak performance in the share of imports in GDP at 62.9% in 1968, an improvement from 50.8% in 1967. During the 1970s, the share of imports in GDP exceeded 60% throughout, indicating an improved performance. However, by 1984, the share of imports in GDP had fallen to 57.96%, 4.61 percentage points down from the previous year. After that, a continuous decline in the share of imports to GDP was experienced until 1988. At that time, the share of imports to GDP remained at 43.9%.

During the period 1990-2000, the share of imports in GDP fluctuated between 37.1% and 49.8%. Over that period, Botswana’s share of imports in GDP fluctuated more than in the preceding decades. These fluctuations were followed by a steady decline towards the end of the decade. By 2000, the share of imports to GDP remained at 40.1%, compared with 49.8% in 1990. The share of imports in GDP declined further in subsequent years until a recovery took place in 2007. In that year, the share of imports in GDP improved from 34.1% in 2006 to 40.1%. In recent years, there have been increases in Botswana’s share of imports in GDP, with growth rates exceeding 50 percentage points as shown in Figure 4.1. Figure 4.1 shows the trends in the shares of exports in GDP as well as the share of imports in GDP in Botswana during the period 1960-2015.

Figure 4.1 Botswana's exports and imports as percentage of GDP (1960-2015)



Constructed from World Bank (2016)

4.5.2 Performance of trade openness and economic growth in Botswana

Botswana's trade openness exhibited an upward trend, particularly during the early 1960s, the '70s and most of the '80s. These improvements in the country's trade openness mostly occurred during the time when the country had started to introduce measures to move towards a more liberal trade regime. During the period between 1960 and '70, Botswana's trade openness rose steadily from 65.9% in 1960 to 85.6% in 1970. Though there was roughly a five-percentage-point decline in trade openness in 1967, Botswana's trade openness recovered in 1968 as shown in Figure 4.2. This recovery in trade openness corresponded to the developments in the country that resulted in remarkable increase total trade in Botswana. These new developments included the discoveries of diamond and copper-nickel deposits as well as the conclusion of the Customs Union Agreement in 1969 (Dahl, 1981).

From 1971 until the early '80s, there was a continuous, robust increase in Botswana's trade openness. At that time, the level of trade openness had risen from 94.7% in 1971 to 119.5% in 1980. However, towards the mid-'80s, Botswana's trade openness slowed, indicating a decline in the ratio of total trade to GDP. This decline in trade openness corresponded to Botswana's economic recession of the early 1980s. After that, further decreases in trade openness occurred. As Figure 4.2 shows, the decline in Botswana's trade openness worsened after 1987 through to

the early ’90s. There was a substantial reduction from 123.6% in 1987 to 86.2% in 1993 (see Figure 4.2).

In 1994, the level of trade openness in Botswana stood at 88.2%, two percentage points higher than in the previous year. Although Botswana’s trade openness recovered in 1994, its overall performance during the ’90s was relatively lower than its performance during the ’70s and ’80s. In recent years, Botswana’s trade openness has exhibited an upward trend, indicating an improvement in the ratio of total trade to GDP. By 2013, the level of trade openness in Botswana had risen to 115%.

In Botswana’s economic growth, there was an upward trend during the period following the country’s independence in 1966. By 1969, Botswana’s GDP growth was 15.1% compared with 6.7% in 1961 (see Figure 4.2). Since independence, Botswana’s economy experienced faster growth, reflecting structural transformations that involved a more intensive use of skilled labour, capital and mineral resources (Leith 1997:21). The expansion in Botswana’s economic growth after the mid-1960s was also associated with the stimulation of aggregate demand in the country. In particular, during the fiscal years 1966-’67 and 1967-’68, demand injections from the central government were experienced, which also led to increases in government employment and contribution to value added (Dahl, 1981:6).

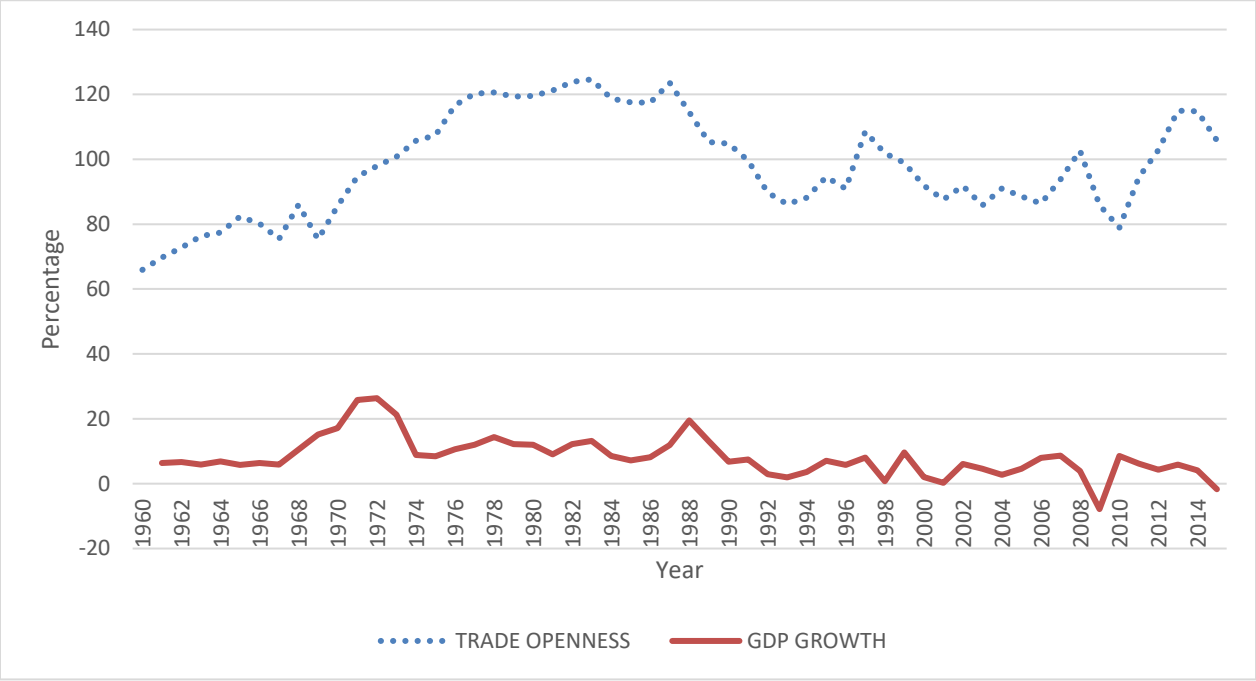
In 1970, the level of economic growth had risen further by two percentage points to 17.1%. After that there was stronger growth in the economy, as evidenced by an average growth rate of 24.5% between 1971 and ’73. Even though the GDP growth rate slowed down in 1974, the second half of the ’70s witnessed GDP growth rates exceeding 12% a year. But this performance could not be sustained in the subsequent period as the country’s GDP growth rate began to fluctuate.

During the 1980s, Botswana’s economy went through a series of recessions and booms in a notable way. By 1981 the country’s GDP growth had contracted from 11.99% in 1979 to 9.06%. As indicated, the beginning of the 1980s was marked by an economic recession in Botswana in 1981; followed by an economic boom during the period 1987 to ’91 (Gaolathe, 1997:37). Though Botswana’s economic growth recovered after the 1981 recession, the period from 1984 to ’86 was marked by sluggish economic growth in Botswana, compared with the rest of the decade. After this sluggish growth, the GDP growth rate picked up remarkably.

During the five years from 1987 to ’91, Botswana’s economic growth expanded as shown in Figure 4.3. This period was a period of expansion in Botswana’s GDP, triggered by the economic boom

of that time. During the 1990s Botswana's GDP growth did not grew to the same extent as it had in the preceding decades. The highest growth rate reached between during the '90s was 9.7% in 1999. After that the GDP growth rate fell drastically to 1.99% in 2000, followed by 0.25% in '01. Since then, Botswana' GDP growth has not reached 9%. In 2013, Botswana's GDP growth stood at 5.9%, much lower than the 13.1% growth rate reached in 1983. However, by 2015, economic growth had dropped drastically as shown in the figure. Figure 4.2 depicts trends in trade openness and economic growth in Botswana during the period 1960 to 2015.

Figure 4.2 Trends in trade openness and economic growth in Botswana (1960-2015)



Constructed from World Bank (2016)

4.6 Trade flows in Botswana

4.6.1 Composition and destinations of Botswana's exports

The composition of Botswana's principal exports has changed considerably over the past four decades. Initially, particularly around 1985, Botswana exported mainly diamonds, followed by copper-nickel matte and meat products. All these three main exports are primary sector products, from mining and agriculture. This observation points out the dominant role of primary sector exports in Botswana during the 1980s. However, the composition of Botswana's principal exports evolved over time as shown in Table 4.3. By 1994, secondary sector exports had risen to prominence.

Even though primary sector exports still dominated Botswana's top exports in 1994, Botswana's vehicle exports rose to second place. This showed a slight shift towards manufactured exports. In 1994, diamonds alone accounted for 74% in total exports, whereas vehicle exports accounted for 5.86%. Although the volume of diamond exports had more than doubled in 1994 compared with 1985, the share of diamond exports during 1994 reflected a decline from the 78% share observed in 1985. Table 4.3 presents Botswana's principal exports during the years 1985 and '94.

Table 4.3 Botswana's principal exports (1985 and 1994)

Year	Product	US$ millions
1985	diamonds	565
	copper-nickel matte	64
	meat products	52
	Total including others	**727**
1994	diamonds	1,385
	vehicles	110
	copper and nickel	97
	beef	64
	Total including others	**1,878**

Compiled from The Economist Intelligence Unit (1987) and (1996)

Botswana's main export destinations are largely European and SACU. In 1985, Europe was the top destination for Botswana's exports, with 81% of the total exports going there. Other main destinations included SACU with 6%, the United States with 5%, and the United Kingdom with 4%. Other African countries accounted for 4%, which is much lower than Botswana's exports to other continents. This shows that around 1985, Botswana's exported less to the African continent than to other regions.

In 1994, Europe still dominated the main destinations of Botswana's exports with an 86% share. During the same period, the share of Botswana's exports to SACU rose from 6% to 9%. Another sub-Saharan African country, Zimbabwe, was among Botswana's top export destinations, with a 3% share in 1994. This shows the increasing role of Southern African countries among

Botswana's export destinations. Table 4.4 presents Botswana's main export destinations during 1985 and 1994.

Table 4.4 Botswana's main export destinations (1985 and 1994)

Year	Destination	% of total
1982	Europe (excluding United Kingdom)	81
	Southern African Customs Union	6
	United States of America	5
	Other Africa	4
	United Kingdom	4
1994	Europe	86
	South African Customs Union	9
	Zimbabwe	3

Compiled from The Economist Intelligence Unit (1987) and (1996)

The main destinations of Botswana's top three exported commodities vary considerably (see Table 4.5). In 2010, Botswana's main exported commodity was made up of pearls, precious stones, precious metals and coins. The second most exported commodity was nickel and related articles, while meat and edible offal ranked third. All these three exported commodities were primary sector products, from mining and agriculture. This points to the relative importance of the primary sector in Botswana's trade sector. The other revelation from Table 4.5 is that in 2010, Botswana's top three export commodities were mostly destined for countries in Europe, followed by some countries in Africa. The table shows that in 2010, the United Kingdom, followed by Norway and South Africa, accounted for the largest shares of Botswana's top three exported commodities. As the table shows, South Africa and Zimbabwe were the only African countries that were among the main destinations for Botswana's top three exported commodities. These commodities were destined for different countries as shown in Table 4.5. South Africa was the main destination of meat and edible offal. Zimbabwe, on the other hand, was the main destination of nickel articles.

Moreover, in 2010, Norway was the main export destination of nickel and nickel articles, accounting for 84.8%. On the other hand, the United Kingdom dominated in the exports of pearls, precious

stones, precious metal and coins, with an 78.5% share. Israel and Belgium accounted for less than 8% each, while Germany accounted for 16% of Botswana's top three exported commodities. Table 4.5 presents the composition of Botswana's top three exported commodities together with their main destinations for 2010.

Table 4.5 Main destinations of Botswana's top three exported commodities (2010)

HS	Description	Destinations	Share (%)
71	pearls, precious stones, precious metals, coins *et cetera*	United Kingdom	78.5
		Israel	7.5
		Belgium	4.6
75	nickel and nickel articles	Norway	84.8
		Zimbabwe	14.9
		South Africa	0.2
02	meat and edible offal	South Africa	54.7
		United Kingdom	21.7
		Germany	16.0

Compiled from South African Customs Union Merchandise Trade Statistics (2010)

4.6.2 Composition of Botswana's imports and their major suppliers

The composition of Botswana's imports in recent years is not the same as it was during the 1980s. As shown in Table 4.6, in 1983 for example, Botswana's principal imports comprised mostly manufacturing sector products. At that time, imports of machinery and electrical goods dominated, with a contribution of $116 million (EIU, 1987). This value amounts to 19.5% of total principal imports. The second dominant import products in 1983 were food and beverages, with a $108-million contribution amounting to 18.1%. Imports of petroleum and fuel products ranked last in Botswana's principal imports, with a contribution of $66 million, an 11% share of total principal imports. In 1994, Botswana's top four imports still comprised manufactured goods. However, during 1994, food, beverages and tobacco became the top imported products among other principal imports. The share of food, beverages and tobacco imports stood at $288 million in 1994 (EIU, 1996). This value is equivalent to a 17.6% share in total principal imports. Imports of

chemical and rubber products accounted for the smallest share in Botswana's principal imports, 9.7%. Table 4.6 presents Botswana's principal imports during 1983 and 1994.

Table 4.6 Botswana's principal imports (1983 and 1994)

Year	Product	US$ millions
1983	machinery and electrical goods	116
	food and beverages	108
	vehicles and transport equipment	85
	petroleum and fuel products	66
	Total including others	**596**
1994	food, beverages and tobacco	288
	machinery and electrical goods	288
	vehicles and transport equipment	197
	chemical and rubber products	159
	Total including others	**1,638**

Compiled from The Economist Intelligence Unit (1987; 1996; 2000)

The main sources of Botswana's imports are regionally based. These regions include sub-Saharan Africa, Europe and the United States. In 1985, SACU was the major origin of Botswana's imports, with a 75% share of total imports. At that time, other major import sources included Europe, United Kingdom and "other Africa". Generally, sub-Saharan Africa supplied most of Botswana's imports in 1985, with a joint share of 82% in total imports (see Table 4.7). Over time, the main origins of Botswana's imports changed, as some countries ceased to be Botswana's main suppliers of imports. In 1994, SACU continued to be the main source of Botswana's imports with a 75% share. At that time, the share of SACU's imports in Botswana had increased by seven percentage points to 82% compared with 1985. In the same period, Europe was the second main origin of Botswana's imports with an 8% share, followed by Zimbabwe with 5% (EIU, 1996). Total imports from the sub-Saharan Africa region remained at 87% in 1994, reflecting a five-percentage-point increase from the joint share in 1985. Table 4.7 presents the main origins of Botswana's imports during 1985 and 1994.

Table 4.7 Botswana's main origins of imports (1985 and 1994)

Year	Destination	% of total
1985	South African Customs Union (SACU)	75
	Other Africa	7
	Europe (excluding United Kingdom)	7
	United Kingdom	5
	United States of America	3
1994	South African Customs Union	82
	Europe	8
	Zimbabwe	5

Compiled from The Economist Intelligence Unit (1987; 1996)

The sources of Botswana's three main imported commodities in recent years vary from one commodity to another (see Table 4.8). In 2010, South Africa was the major source of Botswana's top three imports, accounting for 93.3% in the category of mineral fuels and mineral oils. United Kingdom was the second of Botswana's import sources with a 74.4% share. As revealed in Table 4.8, only sub-Saharan African countries supplied all of Botswana's mineral fuels and mineral oils in 2010, these countries being South Africa, Namibia and Mozambique. Apart from the sub-Saharan African countries, other major sources of Botswana's imports in 2010 included China and four other countries: the United Kingdom, Israel, Belgium and Slovakia. This indicates that European and sub-Saharan African countries are the main sources of Botswana's imports. As revealed in Table 4.8, the major commodities the European countries supplied to Botswana in 2010 comprised pearls, precious stones, precious metals and coins. China, on the other hand, supplied mainly machinery, mechanical appliances and parts, as revealed in the table. Table 4.8 also shows that in general, sub-Saharan African countries mainly supplied Botswana with imports of primary sector products. This is an indication that Botswana's top imports from sub-Saharan Africa are concentrated in the mining sector. Table 4.8 provides an analysis of the main sources of Botswana's top three imported commodities during 2010.

Table 4.8 Main sources of Botswana's top three imported commodities (2010)

HS	Description	Destinations	Share (%)
27	mineral fuels, mineral oils *et cetera*	South Africa	93.3
		Namibia	5.2
		Mozambique	0.9
71	pearls, precious stones, precious metals, coins *et cetera*	United Kingdom	74.4
		Israel	12.9
		Belgium	6.5
84	machinery and mechanical appliances and parts	South Africa	68.7
		China	17.6
		Slovakia	3.2

Compiled from South African Customs Union Merchandise Trade Statistics (2010)

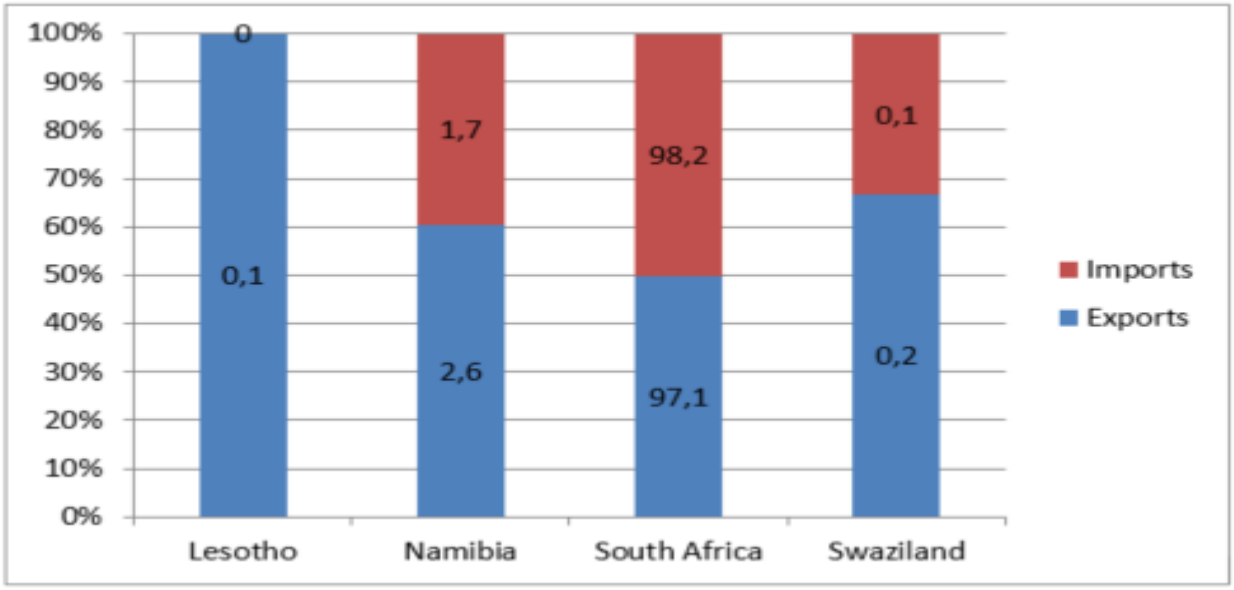
4.6.3 Trends in Botswana's intra-SACU trade

The South African Customs Union (SACU) plays a significant role in Botswana's exports and imports. Among the other SACU countries, most of Botswana's intra-SACU trade is with South Africa. In 2010, South Africa alone accounted for 97.1% of Botswana' intra-SACU exports and 98.2% of Botswana's intra-SACU imports (see Figure 4.3). During the same period, the other three SACU countries – Lesotho, Namibia and Swaziland – jointly accounted for barely 3% of Botswana's intra-SACU exports.

Regarding intra-SACU imports, South Africa was the main source of Botswana's imports in 2010. The other SACU countries – Lesotho, Namibia and Swaziland – collectively accounted for only 1.8% of Botswana's intra-SACU imports. With the exceptions of Namibia and South Africa, there is an indication of little intra-SACU trade between Botswana and the remaining two SACU countries, Lesotho and Swaziland. No intra-SACU imports from Lesotho were recorded in 2010,

whereas Swaziland's share of Botswana's intra-SACU imports was 0.1%. Figure 4.3 shows Botswana's intra-SACU trade shares during 2010.

Figure 4.3 Botswana's intra-SACU trade shares (2010)



Constructed from South African Customs Union Merchandise Trade Statistics (2010)

4.7 Concluding remarks

This chapter provided a discussion on trade openness and economic growth in Botswana. The focus of the discussion entailed an overview of trade openness in Botswana, stressing the key transformations the country has implemented since its independence in 1966. Since independence, Botswana's economy has evidenced significant growth rates, the highest growth rates being realised particularly between 1966 and '74. The initial period following independence was a period of major discoveries in the mining sector, especially involving copper and nickel minerals. Increased demand for Botswana's products from the late 1960s also drove up economic growth in the country. There is also strong evidence of the role played Botswana's association with other trade partners, particularly the European Union and the United States.

Following the conclusion of the South African Customs Union Agreement in 1969, Botswana grew steadily. The important role of SACU in Botswana has been reflected in the main destinations of Botswana's trade, in which SACU remains as a top destination for exports as well as one of the major suppliers of imports to Botswana. Moreover, the 2002 SACU Agreement has also shaped Botswana's trade policy to some extent.

Botswana's trade policy has been one of the key factors influencing the country's trade openness. In this policy, Botswana indicates its commitment to liberalising trade. This commitment has been reflected in reductions in tariffs as well as the elimination of tariffs on several products entering Botswana. Apart from the enforcement of freer trade, the adoption of an export-led strategy in 1998 also anchored the country's trade openness and growth. To complement the export-led strategy, various strategic frameworks were implemented in Botswana over the past two decades, including Vision 2016 and the National Development Plan.

Although Botswana's economy has shown some significant growth in over the past five decades, there is an indication of the country's heavy reliance on exports from the primary sector. Exports of both diamonds and meat continue to dominate Botswana's principal exports. In its Economic Diversification Drive, Botswana emphasises the need to create linkages that could help diversify the economy away from heavy reliance on primary sector exports.

Trends in trade openness and economic growth reveal that in recent years, there have been improvements in trade openness as well as in GDP growth. With these developments in Botswana's economy, the country needs to see to sustaining its commitment to achieve an open and diversified economy.

CHAPTER 5

TRADE OPENNESS AND ECONOMIC GROWTH: LITERATURE REVIEW

5.1 Introduction

This chapter discusses the theoretical and empirical literature review on trade openness and economic growth. The chapter is organised into seven sections. Following the introduction, Section 5.2 reviews the theoretical linkages between trade openness and economic growth, while Section 5.3 discusses theories of international trade and economic growth. Then Section 5.4 reviews literature on trade policy and economic growth, while Section 5.5 presents empirical evidence on trade openness and economic growth. Section 5.6 discusses the definition and measurement of trade openness, while Section 5.7 concludes the chapter.

5.2 Trade openness and economic growth: theoretical linkages

Studies investigating the relationship between trade openness and economic growth identify various channels through which trade openness may affect economic growth. Based on Wacziarg (2001); Baldwin and Forslid (1996); Grossman and Helpman (1991); and Rivera-Batiz and Romer (1991b), This study reviews six main channels that link trade openness with economic growth. These channels include government policy, allocation and distribution/reallocation, technology transmission, scale effects, redundancy effects, and integration effects. In Wacziarg (2001), the study classifies the links between trade openness and economic growth into three categories: government policy, allocation and distribution, and technology transmission. Grossman and Helpman (1991) on the other hand propose that trade openness may affect economic through diffusion of knowledge, redundancy effects, scale effects, and reallocation of resources. Similarly, Rivera-Batiz and Romer (1991b) identify redundancy effects, reallocation effects, and integration effects as the main channels through which trade openness may be linked to economic growth.

The first channel is referred to as the *government policy channel.* The argument is that the effect of trade openness on economic growth is likely to result from either the implementation of macroeconomic policy or from the size of government (see Wacziarg, 2001). Regarding macroeconomic policy, the argument is that the more open an economy is, the more likely it is to implement stable macroeconomic policies. One of the reasons to explain this is because trade openness may induce domestic economies to adopt policies that improve the competitive environment for domestic firms that trade internationally (Wacziarg, 2001). In the light of this hypothesised positive relationship between government policy and economic performance, it can therefore be argued that trade openness may have a positive impact on economic growth. This argument is consistent with Fischer (1993), who maintained that stable macroeconomic policies

are associated with sustained economic growth. Among other factors, such macroeconomic policies are characterised by low and predictable inflation, sustainable fiscal policy, and a viable balance of payments.

Regarding the size of government as another link between trade openness and economic growth, there are conflicting views in the existing literature. Some proponents maintain that increased trade openness tends to be associated with larger government size (see Rodrik, 1998), whereas others argue that there is a negative association between trade openness and government size (for example Benarroch and Pandy, 2008). According to Rodrik (1998), open economies tend to have a larger government size since a larger public sector may be required in alleviating the economy against external shocks. Therefore, in this view, there is a positive relationship between trade openness and the size of government. On the other hand, Benarroch and Pandy (2008) maintain that there is a negative association between trade openness and government size driven by the fact that a larger government size leads to lower trade openness. Other related arguments consider the size of a country as having a bearing on the overall association between trade openness and the size of government. For instance, Alesina and Wacziarg (1998) posit that smaller countries tend to be more open to trade and have a larger government size, while larger countries tend to be less open to trade and have a smaller government size.

The second channel through which trade openness may affect economic growth is referred to as *allocation and distribution* of resources. Thus, for various reasons, economies that are more open to trade are more likely to be associated with efficiency in resource allocation. Some of the main reasons why open economies are more likely to have efficient allocation of resources than closed economies include minimal price distortions and specialisation. In open economies, there tend to be relatively minimal price distortions, which results in an efficient allocation of resources. This is because open economies tend to set their prices of tradable goods in line with world market prices, resulting in a lower degree of price variation and a more efficient allocation of resources (Wacziarg, 2001). Moreover, by allowing the exchange of products in international markets, trade openness gives countries an opportunity to specialise in the production of products in which they possess a comparative advantage over other products.

Rivera-Batiz and Romer (1991b) illustrate how economic growth may be realised through the sectoral allocation of resources. They maintain that the sectoral allocation of resources induces a country to allocate its basic inputs across the sectors based on its resource endowments. Thus, there is a tendency for a country to reallocate its resources toward a sector in which it possesses

some comparative advantage. Consequently, through specialisation, countries are given an ability to reallocate resources either between sectors within their borders or across international markets. Thus, because of resource allocation, there could be an increase in the rate of knowledge accumulation emanating from the increase in the amount of resources devoted to R&D. The increase in the rate of knowledge accumulation contributes to expansion in the extent of innovation, which is considered as one of the engines of growth. Therefore, as countries become more innovative because of knowledge accumulation, their rates of economic growth are likely to increase (Grossman and Helpman, 1991; Rivera-Batiz and Romer, 1991b). This kind of economic growth is known as innovation-driven growth.

Apart from causing the reallocation of resources, international trade may also affect the pattern of trade, which could result in a country's being a net exporter or a net importer. This is because in the presence of increasing returns to scale, for example, there is a likelihood of concentrating exports in those products that have a relatively larger domestic demand. Generally, producers would tend to locate their firms closer to larger markets so as to reduce transport costs. By so doing, a country engaged in this kind of trade, characterised by economies of scale, would then become a net exporter for the product in which demand is relatively higher (Krugman, 1980).

In addition to allocation effects, the other link through which trade openness may affect economic growth is *distribution effects*, which allow importation of capital goods that would have been too costly or otherwise unavailable under autarky. This suggests that trade openness may lead to an increased supply of capital goods attained at relatively lower costs. Baldwin and Forslid (1996) extend the debate on trade openness and capital accumulation using Tobin's q theory, where q is the determinant of real investment. In their view of Tobin's q theory, they postulate that trade liberalisation represents an incremental policy reform in which changes in trade policy lead to the distribution of resources toward capital accumulation. Thus, changes in q predict changes in growth rates of capital accumulation and output.

International trade may also have some effects on income distribution. But the severity of the problems arising from income distribution is determined by the variations in factor proportions. When factor proportions are similar, income distribution problems that result in trade openness are lessened (Krugman 1981). In addition to that, for the factors to gain from trade there has to be some degree of product differentiation. The need for product differentiation arises because product differentiation directs monopolistic competition (Havrylyshyn, 1990). When the products are well differentiated, it becomes possible easily to substitute one product for another and both

factors of production gain from trade, but if the rate of substitution is smaller, the scarce factor gains from trade (Krugman 1981: 971). International trade has also been associated with positive effects on total factor productivity. The argument is that in more open economies, international trade is likely to be positively correlated with factor productivity because of the degree of specialisation, physical capital, human capital, and factor efficiency (Alcala and Ciccone, 2004).

In demonstrating the link between international trade and factor productivity, Helpman and Itskhoki (2010) developed a model that links trade to the labour market. The argument is that differences in labour market rigidities influence trade flows. Therefore, a country that has relatively fewer labour market rigidities in the differentiated sectors tends to be a net exporter of differentiated products and an importer of homogeneous goods. Moreover, depending of the size of labour market frictions, the reductions in the costs of exporting could bring about more investment from other trading partners. Since the gains from international trade are dependent on the magnitude of labour market frictions, in situations where labour market frictions are smaller, there will be an incentive to increase trade and investment, causing real income to increase (Fajgelbaum, 2013).

The third channel through which trade openness may affect economic growth is *technological transmissions*. Based on the existing literature, the common view from some of the studies investigating trade and the transmission of technology is that trade openness helps to improve intra-industry productivity by allowing diffusion of knowledge and technological transmissions across countries (see Keller, 2002; Bitzer and Geishecker, 2000; Coe and Helpman, 1995). Thus, when one country imports intermediate products from a more industrialised country with larger stocks of technology, there could be some knowledge spillovers and technological transmissions to the importing country. As argued by Rivera-Batiz and Romer (1991a) and Wacziarg (2001), over and above the flow of goods, the effects of international trade on the long-run rate of economic growth also come through the transmission of ideas and knowledge spillovers.

In open economies, technological spillovers are associated with the net inflow of investment. This is because as a country experiences more foreign investment inflows, there is a tendency for technological innovations to increase (Chang and Mendy, 2012). Compared with a country that is less open to trade, these technological innovations in an open economy may lead to an expansion in the cumulative research and development (R&D) of a country, thereby stimulating economic growth through enhanced productive capacity (Evenson and Singh, 1997; Vamvakidis, 1998). Consequently, a country that is more open to trade will experience larger technological spillovers, thereby enjoying faster economic growth.

Using a dynamic general equilibrium model of economic growth, Segerstrom (1990) analysed the effects of trade on economic growth focusing on the effects that arise from research and development (R&D). He showed that economic growth is endogenously driven by innovation and imitation. The argument is that, by engaging in international trade, a firm may decide to devote its resources to imitating new superior products or to discovering new products. Eventually, innovation and imitation become the outcomes of research and development (R&D) resources that the firms have devoted.

Extending the debate on technological transmissions with a focus on developing countries, Coe and Helpman (1995) identify two factors that matter in the link between trade openness and economic growth. First, the growth in factor productivity in developing countries is assumed to be positively and significantly related to R&D in their industrial country trade partners. Second, growth of total factor productivity in developing countries is assumed to be positively related to their openness to trade with industrial countries. In support of the R&D-driven growth hypothesis, Keller (2002) maintains that in open economies, trade in advanced intermediate products leads to international transmission of technology, which is beneficial to economic growth. Therefore, there are some expected positive knowledge spillovers arising from countries outsourcing their intermediate products (Bitzer and Geishecker, 2002). However, other studies argue that R&D spillovers are not strictly related to international trade. For instance, Lumenga-Neso, Olarreaga and Schiff (2005), maintain that positive effects of R&D spillovers can be realised even when countries do not trade with each other.

The fourth channel that links trade openness and economic growth is the *redundancy effects* channel. According to (Walz, 1999) and Vamvakidis (1998), redundancy effects encourage more R&D and innovation, and also help to eliminate the overlap that could arise in the creation of new goods in the trading countries.

The fifth channel through which international trade may affect economic growth is the *integration effects* channel. Baldwin and Forslid (2000) argue that because of being integrated with other economies, a country may realise increased labour productivity and economic growth resulting from an enlargement in its market's size. However, the integration effect is more relevant to developed economies. This is because through the flows of ideas and of goods, increased integration between the developed economies can lead to an increase in the long-run rate of economic growth (Rivera-Batiz and Romer, 1991a: 531).

The sixth channel through which trade openness may affect economic growth is the *scale effects* channel. According to Baldwin and Forslid (1996), in the long run, the extent to which trade policy affects economic growth is determined by the size of a country. Therefore, the effects of trade policy on economic growth tend to be more pronounced in larger economies as opposed to smaller economies. The scale effects also indicate the association between the rate of innovation and the size of the economy. Thus, when a country opens to international trade, there could be an enlargement of the market size, which might benefit the firms in that country.

5.3 Theories of international trade and economic growth

Various theories of international trade have sought to explain why international trade is beneficial to the economy. Of the existing theories, this study reviews the following theories of international trade: Smith's theory of absolute advantage; Ricardo's theory of comparative advantage; the Heckscher-Ohlin theorem; the Stolper-Samuelson theorem (1941); the Samuelson factor price theorem (1949); the Johnson theorem (1955); Baghwati's immiserising growth theorem (1958); and the theories of Balassa and Samuelson (1964); and of Samuelson (2004).

5.3.1. Classical theories of international trade: Adam Smith and David Ricardo

Adam Smith (1723-'90), who pioneered the theory of absolute advantage, considered absolute advantage as the motive behind international trade. Smith was able to demonstrate that because of the benefits that arise from trade, nations engage with one another in exchange of trade. To Smith, the absolute cost advantages and the division of labour form the basis for his theory of international trade (Schumacher, 2012). The theory of absolute advantage indicates that given the available costs of production, any of the two countries that trade in two identical commodities will decide to specialise in the production of the commodity in which they have an absolute advantage. The analysis also demonstrates how economic growth can be improved through division of labour, which is perceived to bring the widening of the extent of the market as well as increases in productivity (Myint, 1958:318).

The relevance of division of labour in economic growth results from its ability to improve the quality and quantity of production. As a result, if a nation adopts a more progressive division of labour, this could lead to improvements in the quality and quantity of production, eventually resulting in an increase in output (Schumacher, 2012:58). Thus, this observation reveals that through division of labour, international trade could bring some indirect effects on economic growth. Smith's analysis of international trade also shows how trade could have growth-stimulating effects in the economy, under a set of conditioning assumptions. One of the assumptions is that when factor

prices across the countries are different, it becomes possible for a return to productivity to be influenced by trade. This assumption makes differences in factor endowments and differences in factor prices across countries to be important factors in Smith's analysis of international trade. This analysis shows that over a period, the effect of factor prices could stimulate economic growth. Using the example of rent as a price of land, Smith's analysis shows that low rents could cause an increase in exports and in the rate of profits in the sector that uses land intensively, namely the agricultural sector. The increase in the rate of profits would in turn result in a strong increase in saving and capital accumulation, although in the long run diminishing returns from land could deplete the rate of profit (Myint, 1977:232). However, depending on the net effect from savings and capital accumulation as well as income from other sources, economic growth could still occur in the long run.

In his recognition of the role of international trade in the economy, Smith made a strong proposition for free trade, rendering government intervention as being necessary only to a limited extent. Thus, advocacy for free trade is another key element in Smith's analysis of trade. His argument for free trade was based on the belief that free trade brings about optimal allocation of capital between the different sectors of the economy (Coulomb, 1998:299). However, the implementation of free trade requires an embankment of policies that encourage international trade and improve economic growth.

While Smith's contributions to the theory of international trade are evident, it was his successor, David Ricardo (1772-1823), who brought an extended dimension to trade theory. Unlike Smith, whose analysis focused on the notion of absolute advantage, Ricardo based his analysis on the principle of comparative advantage. Comparative advantage explains how the gains from trade can be realised through specialisation and reallocation of resources into the industries that have a higher comparative advantage (Ozawa, 1992).

With the law of comparative advantage, Ricardo was able to demonstrate that it is more beneficial for an economy to specialise in commodities that it can produce with relatively lower costs. This is because according to the principle of comparative advantage, it is the relative values of commodities, not their absolute values, that regulate their exportation (Ruffin, 2002). Therefore, if a country exports a commodity in which it has a greater comparative advantage, such a country could realise higher profits since it would be able for it to produce larger quantities of that commodity at relatively lower costs.

According to Markusen *et al* (1995), the relevance of comparative advantage results from the things that determine it, including technological differences such as product differentiation, and labour productivity. Through technological differences, each country becomes a net exporter of a commodity that can be produced with abundant factor at relatively lower cost. This behavior explains why developing countries are net exporters of commodities that are produced with cheaper, low-skilled labour (Markusen *et al*, 1995).

5.3.2. Heckscher-Ohlin theorem

The Heckscher-Ohlin theorem indicates that each country becomes a net exporter of the good that uses its abundant factor intensively. Developed by Heckscher (1919) and Ohlin (1933), this theorem derives some of its features from David Ricardo's principle of comparative advantage. However, the Heckscher-Ohlin theorem differs from Ricardo's analysis of international trade in that it includes capital as an additional factor of production apart from labour. Moreover, while Ricardo considered comparative advantage as the basis for international trade, the Heckscher-Ohlin theorem demonstrates that international trade is motivated by factor endowments.

Under a set of simplifying assumptions, the Heckscher-Ohlin model shows how benefits can arise from international trade. The analysis of the Heckscher-Ohlin theorem starts with an assumption of perfectly competitive markets in which two countries produce two goods using two factors: labour and capital. In this case, the notion of constant returns to scale holds in production and the total supply of capital and labour is fixed. The factors of production are fully employed, such that there are no distortions in the markets. In addition, both trading countries are assumed to have identical and homogenous factors. However, there are differences in the relative factor endowments between the countries.

According to the Heckscher-Ohlin theorem, because of differences in relative factor endowments between the countries, international trade consequently influences the pattern of trade as well as the prices of productive factors. Thus, the theorem predicts that patterns are driven by variations in factor intensities. If a country with abundant labour resources has a labour-intensive good, such a country benefits from producing that good since its production comes at relatively cheaper cost. If the price of the labour-intensive commodity were to rise, an increase in the relative price of labour would occur since in this case labour is the factor used intensively in production. The country involved in production of the labour-intensive commodity would move towards producing more of this commodity and export it. At the same time, this country would choose to import the

good that uses its relatively scarce factor, since the domestic production of such good would result at a relatively higher cost.

Since the Heckscher-Ohlin model shows how the factors can be transferred from locations where they are abundant to locations where they are scarce, the model has implications for the distribution of income. In this view, Leamer (1995) indicated that the Heckscher-Ohlin model makes it possible for international trade to compensate for uneven geographic distribution of income through the transfer of productive resources from well-endowed locations to less-endowed locations.

In conclusion, the major contribution of the Heckscher-Ohlin model lies in its ability to demonstrate how international trade influences the pattern of trade given the relative factor endowment. Hence, through the influence of international trade on the pattern of trade, each country would end up benefiting from trade by becoming a net exporter of the product it is able to produce cheaply with a relatively cheaper and abundant factor of production.

5.3.3 Stolper-Samuelson (1941) and Samuelson (1949) factor price equalisation theorem

In contrast to the postulates of the Heckscher-Ohlin model, Stolper (1941) and Samuelson (1941) developed a theorem that links prices of goods with factor returns. This model fundamentally shows how trade affects the economy through the effect on factor returns, which result from changes in relative prices of goods. According to the Stolper-Samuelson theorem, an increase in the relative price of a good will lead to an increase in the real return on the factor used intensively in the production of that good. However, as the real return on the intensive factor increases, the real return on the factor used less intensively will fall. Thus, if the price of a labour-intensive good increases, an increase in the real wage rate will result, since labour is the most intensive factor in this case. On the other hand, since capital represents the least intensive factor in this instance; the real return on capital will fall.

The Stolper-Samuelson theorem therefore shows that opening up to free trade could result in the abundant factor benefiting from increases in factor income relative to the scarcity factor. This shows that free trade could make an abundant factor become better off in comparison with the scarce factor. Therefore, the Stolper-Samuelson theorem inherently shows how trade could affect the distribution of income through the changes in prices of goods that ultimately influence factor returns.

Following the Stolper-Samuelson theorem, Samuelson (1949a) developed the factor price equalisation theorem to explain how international trade affects the economy through the equalisation of factor prices. The theorem hypothesises that countries producing the same combination of commodities using identical technologies must have the same factor prices, if product prices in these countries are the same (Leamer, 1995). Hence, the factor price equalisation theorem shows that under certain specified conditions, free trade in goods could bring the complete equalisation of factor prices (Samuelson, 1949b).

For the factor price equalisation to be valid, there are several simplifying conditions that must be met. These are that there are two countries trading in two goods that are produced using two factors, labour and capital. It is also presumed that the law of diminishing marginal returns in production holds, reflecting the prevalence of differing intensities of factors of production. Since the factors of production are assumed to be qualitatively identical, both countries face the same production functions. However, the factors of production are assumed to be immobile between countries. The production strategy is such that both countries produce both goods since there is no complete specialisation. Moreover, the goods produced are perfectly mobile between the countries, and as such there are no impediments to trade in the form of tariffs or transport costs.

When all the conditioning assumptions of factor price equalisation theorem hold, real factor prices in both countries must be the same. The equalisation in factor prices is enabled by a one-to-one correspondence between commodity prices and factor prices, which makes it possible for free international trade to cause a change in any commodity price to result in a more than proportionate change in the corresponding factor price (Chipman, 1969).

Although the factor price equalisation theorem provides the basis for tracing the effects of trade in the economy, it can however be argued that the propositions of the factor price equalisation theorem are more applicable to a static economy. In a dynamic economy, it is unlikely that the equalisation of commodity prices would completely equalise the factor incomes. Such a discrepancy between the static economy and the dynamic economy arises from the absence of specialisation the static model. In the dynamic model, there are various factors that influence countries to specialise in the production of commodities that are produced with an abundant factor. These include variations in factor supplies as well as differences in rates of time preferences (Stiglitz, 1970).

5.3.4 Johnson (1955) and Baghwati (1958) immiserising growth

Johnson (1955) developed a different proposition to demonstrate how international trade can be linked with economic growth through the transmission of benefits from trade. Unlike Samuelson's factor price equalisation theorem, Johnson's analysis allows for complete specialisation in production. The argument is that in a two-goods, two-country model, openness to international trade results in the transmission of the benefits accruing from trade. These benefits from trade occur when each country completely specialises in the production of the one good it exports, while it imports the other good which it consumes. Moreover, because of the prevalence of complete specialisation, it becomes possible for the benefits from trade to be realised even if the two trade partners' economies vary considerably. Hence, even if one trade partner's economy is static, while the other trade partner's economy is growing, there could still be a transmission of the benefits from trade. This transmission of benefits from trade would be from the growing economy to the static economy.

Following Johnson (1955), Bhagwati's immiserising growth hypothesis is another theorem that links international trade with economic growth. However, the immiserising growth hypothesis demonstrates how trade and economic growth can be negatively associated. While the positive relationship between international trade and economic growth has been acknowledged in some economic theories, Bhagwati (1958) showed that economic growth can have some adverse effects on international trade. Bhagwati's immiserising growth hypothesis shows that under certain conditions, economic expansion could harm trade. Some of the distinct conditions that may lead to immiserising growth include cases where a country exports a primary product that has a highly inelastic price elasticity of demand or a highly inelastic income elasticity of demand (Pryor, 2007). Thus, if a country increases exportation of products with a highly inelastic demand, then a decrease in the international prices of those products would occur, causing an adverse shift in the terms of trade to occur in that country.

Given the extent of its adverse effect on the volumes of exports, the phenomenon of immiserising growth could also represent a loss to the society. However, the extent of the loss to the society would be determined by the size of the income elasticity of demand. Pryor (1966) indicated that if a country with an income elasticity of demand of less than unity has an export-biased growth, such a country would face deterioration in its terms of trade provided that its trade partner also has an income elasticity of demand of less than unity. The persistent deterioration in the terms of trade would eventually result in immiserising growth. Immiserising growth in this case therefore

reflects an outcome of interactions between international trade and economic growth through the effect on income elasticity of demand.

Apart from being driven by elasticity of demand, immiserising growth could also result from the implementation of specific growth strategies that result in significant changes in the volumes of trade as well as in the terms of trade. If a country adopts a growth strategy that makes it produce more volumes of a product that used to be exported by its trade partners, this could result in a fall in the exports of the trade partner as well as a deterioration in its terms of trade. This scenario explains why immiserising growth is likely to occur in an industrialised economy as it experiences a decline in its exports to the less-developed trade partner. The argument is that if a less developed economy implements a growth strategy that enables it to produce the products it used to import from the industrialised economy, the exports from the industrialised economy to the less developed economy would fall, resulting in adverse effects on the terms of trade of the industrialised economy (Samuelson, 1994).

5.3.5 Balassa-Samuelson (1964) and Samuelson (2004) geographical specialisation hypothesis

The Balassa-Samuelson hypothesis was developed by Balassa (1964) and Samuelson (1964). It shows how rapid growth in real output per capita is accompanied by productivity differentials between the tradable sector and the non-tradable sector. These productivity differentials also determine the domestic price of non-tradables, which become core in explaining the effects of trade on real output per capita. Most importantly, the Balassa-Samuelson hypothesis shows that there is a positive relationship between the relative price of non-tradables and aggregate output per capita (Asea and Mendoza, 1994).

Apart from working through the relative price of non-tradables, the Balassa-Samuelson hypothesis also shows how rapid growth in output per capita can also result from real exchange rate appreciation. The appreciation of the real exchange rate in this scenario is caused by a faster increase in productivity in tradable goods in comparison with the rate of increase in productivity of non-tradable goods (Drine and Rault, 2010). This effect of real exchange rate appreciation on output growth result confirms that under certain circumstances trade openness causes expansions in economic growth.

Following the earlier works of Balassa and Samuelson (1964), other evidence linking international trade and economic growth also shows how geographical specialisation causes international trade to influence economic growth positively. Using the geographical specialisation hypothesis, Samuelson (2004) showed that through geographical specialisation, free international trade can positively affect the real per capita incomes. The argument is that in comparison with autarky, free trade tends to raise outputs globally and also increases world income. This positive effect of free trade on output and income arises from geographical specialisation through which each region would specialise in producing the good that has a lower opportunity cost.

5.3.6 Theories of economic growth

5.3.6.1 The Harrod-Domar growth model

The Harrod-Domar model (1946) is one of the earlier frameworks that sought to explain how long-run economic growth occurs. The model first assumes that output is produced with the use of capital and some constant labour productivity. The model also assumes that production takes place under the assumption of fixed factor proportions, ruling out the possibility of substitution between factors (Solow 1956, p65). With these assumptions, the rate of economic growth is regarded as being determined by the two core factors, namely, the capital-output ratio and the savings rate.

The savings rate, which presents the ability of a country to finance investment, also represents the level of output that is left over after consumption. This is because, since not all the available output is consumed, the remainder could be either saved or invested. The resulting new investment would eventually lead to corresponding increases in national output (Todaro and Smith, 2003).

One of the fundamental principles of the Harrod-Domar model is capital-output ratio, which represents the additions to output that are brought about by a given amount of capital. In addition, the natural rate of growth is another key principle of the Harrod-Domar model, which is defined as the rate of growth that is required to maintain full employment (Harrod, 1948). The long-run implication is that any deviations from the natural rate of growth will result in increasing unemployment or prolonged inflation (Sato, 1964).

As it is, the Harrod-Domar model places no role for international trade on economic growth. Thus, the relationship between trade openness and economic growth is not recognised in the Harrod-Domar model. However, the model provides the foundation for a further exploration of the factors that affect long-run economic growth.

5.3.6.2 Neoclassical growth model: Solow (1956) and Swan (1956)

The neoclassical growth model of Solow and Swan (1956) addresses some of the limitations of the Harrod-Domar model. Unlike the Harrod-Domar model, the Solow-Swan model assumes that production takes place under the condition of variable factor proportions. With the condition of variable proportions, the implication is that in the long run any deviations from the natural rate of growth will converge back to original equilibrium (Sato, 1964). In this neoclassical framework, this ability for the economy to converge in the long run is facilitated by diminishing returns to re-producible capital (Barro, 1991).

In the context of neoclassical growth models, at a given point in time t, the simple aggregate production function expressing the relationship between output (Y_t), capital (K_t), labour (L_t) and technology (A_t) is given by:

$$Y_t = F(K_t, L_t, A_t) \quad \text{.....(5.1)}$$

Unless augmented by some other additional variables, the relationship specified in Equation 5.1 offers no platform to link trade openness with economic growth. The improvement over the simple aggregate production function comes with modifications that normally allow for a host of other determinants of growth to be featured in the production function. This extended form of production function is common to the endogenous growth literature.

In the light of the endogenous growth models, other unconventional inputs are included in the model in equation 5.1. These alternative inputs are included to capture the effects of economic policy, political stability and institutional stability on economic growth. The advantage of augmenting the conventional growth equation is that the inclusion of endogenous variables in growth equations has helped explain their relationships with economic growth. Their inclusion has also made it possible to construct hypothesised relationships that explain certain economic behaviours such as the export-led growth hypothesis, the finance-led growth hypothesis and the investment-led growth hypothesis.

In an attempt to estimate the impact of trade openness on economic growth, Rao and Rao (2009) specified a production function depicting a relationship in which the level of output (Y) was not only dependent on capital (K), labour (L), and technology (A), but was influenced by additional variables. These additional potential variables were represented by (Z_t). If the vector of additional

variables is included to the initial aggregate production function, the new production function becomes:

$Y_t = F\ (K_t, L_t, A_t, Z_t)$……..(5.2)

The additional variables represented by Z_t include trade-related indicators such as measures of trade openness, trade policy, export orientation, export diversification. In some cases, Z_t also includes measures of institutional capacity like government policy, government expenditure, financial stability or political stability.

Building on the earlier derivations of the of Harrod-Domar model, Solow (1956) and Swan (1956) extended the Harrod-Domar model by introducing labour and technology as additional factors of production (Todaro and Smith, 2003). As result, in this neoclassical framework, changes in total output are connected to capital accumulation and labour force growth, as well as technology (Guerrini, 2006). Apart from introducing new factors of production into the growth model, the neoclassical growth theory also differs from the Harrod-Domar model by refuting the role of savings in economic growth. The saving rate, which is also identical to investment rate, is constant. The argument is that the equilibrium rate of growth does not depend on the savings or investment. This is because increases in the savings rate will only result in increased levels of output, but not in a higher rate of output growth (Solow 1988, p308).

In addition to the extension of the Harrod-Domar model, Swan (1956) went further to explain how output growth results from the effects of capital accumulation and the growth of productive labour force. He demonstrated that in a scenario where capital and labour are the only factors of production, the annual output (*Y*) would be determined by the stock of capital (*K*), and the labour force (*N*) according to the constant-elasticity production function of the form:

$Y = K^{\alpha} N^{\beta}$……(5.3)

Thus, the rate of growth of output (y) will depend on the relative rate of growth of capital $s^{Y}/_{K}$ and on the relative rate of growth of labour (n) such that: $y = \alpha s^{Y}/_{K} + \beta n$. The terms α and β are the elasticities with respect to capital and labour.

The Swan model also demonstrates that an increase in the saving ratio does not necessarily imply that the level of output per worker has risen. Rather, improvements in output per worker arise as a result of capital accumulation and expansions in productive labour (Swan 1956, p339).

Given the redundancy of the savings rate in the Solow-Swan framework, technological progress becomes a critical factor in determining long-run output growth. This technological progress is assumed to be determined exogenously (Solow, 1956).

In developing the model of economic growth in the presence of technological advancements, the neoclassical growth theory explains that given the available capital stock (*K*), labour force (*L*), and technology (*T*), the growth rate of output in the economy will depend on the following production function:

$$Y = F(K, L, T) \quad \text{.....(5.4)}$$

The relation given in this neoclassical production function indicates that the growth rate of national output can be caused by expansions in capital, improvements in the quality and quantity of labour, or advancements in technology (Todaro and Smith, 2003). The neoclassical production function is characterised by constant returns to scale and diminishing returns to capital and labour. The assumption of diminishing marginal returns implies that increases in capital and labour will only result in temporary increases in economic growth. Thus, the long-run or steady-state growth can only be increased through technological progress (Solow, 1956). This is because technical progress is assumed not only the rate of growth of productivity, but also determines other critical factors. Thus, improvements in technology also determine the shares of income and profits, as well as the connection between investment and potential output (Kaldor and Mirrlees, 1962).

5.3.6.3 Endogenous growth models

The endogenous growth models provide a different argument from that of the neoclassical growth models regarding the sources of economic growth. Unlike the neoclassical growth model, which links increases in economic growth to improvements in exogenous technological progress, the new theories of economic growth regard increasing returns to scale and profit-motivated technological improvements as the primary determinants of productivity gains and growth (Baldwin, 1989). These new theories of economic growth have been developed within the endogenous growth framework. In contrast with the neoclassical growth theory, the endogenous growth theory describes the process of economic growth as being determined by the system governing the production process rather than by forces outside the system (Todaro and Smith, 2003).

One other feature of the endogenous growth theory that sets it apart from other theories of economic growth is its disapproval of the neoclassical assumptions of constant returns to scale and diminishing marginal returns. With the endogenous growth theory, the economy is assumed to operate with the condition of increasing returns to scale. Therefore, in contrast with the models that are based on diminishing returns, the endogenous growth theory models assume economic growth to be increasing over time as a result of accumulation of knowledge by forward-looking, profit-maximising economic agents (Romer, 1986). Consequently, the existence of increasing returns becomes a key factor in explaining endogenous growth. The presence of increasing returns to scale is explained by the external economies that arise from capital investments. The argument is that, as capital investments increase over time, there is an inclination for external economies to offset the propensity of diminishing returns (Todaro and Smith, 2003). Consequently, long-run economic growth results as a net effect of external economies.

In the spirit of the endogenous growth models, Baldwin and Forslid (1996) use Tobin's q theory of investment to demonstrate how trade openness can be linked to economic growth. In their view, trade liberalisation represents an incremental policy reform in which changes in trade policy result in resources being drawn toward capital accumulation because of the changes in Tobin's q. Following from Tobin's q theory of investment, the argument is that changes in the determinant of real investment known as q predict changes in growth rates of capital accumulation and output.

Taking the analysis above to the context of the effects of human capital, the effects of trade policy on economic growth can be traced. Grossman and Helpman (1989b) argue that when a sector that uses human capital intensively in the production of new, non-traded, intermediate products is treated as a substitute for the R&D sector, trade policy that promotes production of final goods in that could be harmful to economic growth. This is because the resulting changes in trade policy will induce the allocation of resources away from the R&D sector towards human capital-intensive goods. The policy implication with regard to this connection between trade policy and human capital is that if a country aims to promote the production of non-traded, intermediate human-capital-intensive goods, then such a policy move becomes a threat to economic growth. Instead, an appropriate trade policy would be the one that promotes production in a sector that complements the R&D sector, such as the labour-intensive goods sector.

Controversies over the role of international trade in endogenous growth models

Although endogenous growth models provide a platform for explaining the linkages between trade openness and economic growth, the experiences of many countries show controversial results. Some scholars argue that innovation-driven growth is more applicable to more industrial countries than it is to less advanced countries. This is because, for a country to innovate and grow faster, it needs to have more investment in R&D (Baldwin, 1989). The less advanced countries are less likely to put their resources towards more investment in comparison with the more advanced countries.

In addition, when a smaller country faces intense competition from more advanced countries, there could be some negative effects on its productivity and output growth. This is because, in the face of intense foreign competition, a less advanced country could be forced to innovate at a slower rate than it ought to, leading to declines in productivity and output growth rates in the long run (Grossman and Helpman, 1991a). In this way, opening to trade could make less advanced countries suffer from strong competition from more advanced countries far worse than it would have been for more industrialised economies. Therefore, when a smaller country suffers from the consequences of slower rate of innovation, it could be caused to shift its resources into production of a different product.

Through the spatial effects, trade openness could also lead to undesirable concentration in certain regions. Consequently, spatial concentration itself gives rise to inequality within the regions, which could be in the form of wage differentials or in the terms of differentials in infrastructural development. Therefore, depending on a country's geographical location, trade openness could raise or lower regional inequality. The disparity in regional inequality arises because, as a country opens to trade, the distribution of economic activity becomes more concentrated in a single metropolitan area, often leading to increases in congestion costs (Mansori, 2003). This increase in congestion costs could reduce national welfare. Moreover, an increase in a country's openness to international trade has more spatial effects in the areas that have more locational advantage, particularly those close to the border (Brulhart, 2011; Nitsch, 2000).

Trade openness can also be associated with personal income distribution effects. The personal distribution of income, though governed by factor endowments, also affects the degree of trade openness. In an open economy, trade openness tends to be positively correlated with higher income inequality, other things being equal (Spilimbergo *et al*, 1999). There are various channels through which trade openness affects income inequality. Anderson (2005) identified these

channels as: firstly, trade openness affects income distribution and in turn affects the relative demand and supply in the factor market, which has a direct effect on the relative shares of the factors in national income. Secondly, increased trade openness promotes inequality in the ownership of the factors of production, which in turn may affect the relative returns to these factors.

From the labour market point of view, trade openness tends to exacerbate differentials in the gender wage gap. Since trade openness influences that reallocation of factors of production, this could change the employment and remuneration of these factors. In most cases, the employment effects of trade openness are mostly positive for women in countries where they are employed in labour-intensive industries (Fonatana, 2003).

Trade openness can also affect the level of financial development. This is because trade openness is a sufficient condition for financial development (Balgati *et al*, 2009). However, openness to trade can have a negative effect on financial development, though temporarily so. When a country opens to international trade, the increased exposure to competition could lead to higher concentration uncertainty and lower levels of investment, so reducing financial development (Kim *et al*, 2010). The other argument about the effect of trade openness on financial development is that the level of capital mobility becomes an important factor. This is because the effect of trade openness on financial development tends to be insignificant or even negative when capital mobility is low (Rajan and Zingales, 2003). Apart from the effect of capital mobility, a failure of trade openness to improve financial development may arise because of other factors. In the presence of deficiencies in the financial sector, the interaction between the financial sector and the real sector is weakened, which would then imply little support for the hypothesis that trade openness leads to financial development. Among other things, the effectiveness of trade sector development in inducing financial development requires a robust causal relationship between the financial sector and the real sector (Gries *et al*, 2009).

Despite the drawbacks resulting from allocation effects of international trade, some scholars show that participating in international trade can still benefit the less-advanced countries through the static efficiency gains from trade. Static efficiency gains from trade arise from the benefits that a country reaps from engaging in international exchange given the available amount of resources and technology. The static gains may induce higher savings and investment, leading to medium-term growth (Baldwin, 1989).

5.4 Trade policy and economic growth

Trade policy adoption and implementation can be vital to economic growth if they make it possible for higher growth rates in real output to be achieved. Krueger (1980) indicated that there are three broad hypotheses that explain how the implementation of a given trade strategy can have significant effects on economic growth. First, export promotion strategy is thought to enhance the factors that make it possible to attain higher economic growth. Also, the administration of import substitution policies results in differences in growth rates. Lastly, trade policy becomes beneficial to economic growth insofar as it does not counter production.

In the developing countries, import substitution industrialisation was adopted for many years preceding the current export promotion strategies. Prior to the adoption of import substitution industrialisation strategy by some of the developing countries, sharp differences in the structure of economic activities between the low- and high-income countries prevailed, which prevented the low-income countries from benefiting from international trade. The low-income countries were particularly dominated by primary sector activities – agriculture and mining sector products – whereas the high-income countries predominantly engaged in the production of highly industrialised capital goods (Bruton, 1998). The downside for the developing countries was that lower productivity growth was experienced in the agriculture and mining sectors, which led to declines in wages and income.

The impoverishment of the developed economies in the light of increased gains in productivity growth in high-income countries made it necessary for the developing countries to adopt a policy that would enable them to create their own large-scale capital goods through the replacement of imports with domestically produced goods (Bruton, 1998). Thus, import substitution industrialisation was adopted by most economies during the early 1950s as a new strategy to foster the development of industries, particularly infant industries. However, while import substitution may generate new capital-intensive activities, its effectiveness in generating economic growth depends on several things, including the size of the economy. In a smaller country, import substitution will increase capital per capita, but reduce total factor productivity due to the absence of scale economies (Rodrigues, 2010). This suggests that the introduction of restrictions to international trade through import substitution may prevent certain domestic industries from taking advantage of the gains from international trade.

During the early years of import substitution industrialisation, it became prominent in Latin America and Europe, during which different measures aimed at assisting domestic industries

were put in place. Such measures mainly targeted two things: first, the protection of infant industries from foreign competition; and second, the encouragement of the development of infant industries (Baer, 1972). Hence, the implementation of import substitution industrialisation was facilitated by rudimentary changes to trade policy that spelled out the measures to be undertaken. These measures included subsidisation of the targeted domestic industries as well as protection of infant industry through various protectionist policy instruments.

The import substitution strategy also seeks to assist developing countries in becoming sufficiently flexible and diversified in production, but also aims at creating opportunities for economic growth (Bruton, 1989). Hence, import substitution industrialisation is believed to facilitate economic growth and socio-economic development through output creation by means of increased domestic production of industrialised goods.

In some of sub-Saharan African countries, (as can be seen in Chapters 2, 3 and 4 of this study), import substitution industrialisation was implemented after independence from colonial rule. This import substitution industrialisation was adopted as an inward-looking development strategy that sought to reduce foreign dependency in domestic markets by replacing industrialised imports with domestically produced goods. sub-Saharan African countries' experience of the process of import substitution industrialisation took place in two stages. The initial stage of import substitution industrialisation happened at about the time when there was a prevalence of small African markets, lack of infrastructure in domestic industry, as well as low per capita income; hence, the second stage of import substitution industrialisation introduced polices aimed at alleviating the under-development of their economies. (Mendes *et al*, 2014). During the initial implementation of import substitution industrialisation, it was believed that the replacement of imports with domestically produced goods would improve self-sufficiency in production as well as economic welfare. However, excessive protection of a domestic economy tends to result in market inefficiencies. Such inefficiencies may result in below-minimum production plants, while they simultaneously lead to the development of oligopolistic and monopolistic market structure (Krueger, 1980). Therefore, because of the costs associated with import substitution industrialisation, its success in generating economic growth did not last long. In several countries, economic growth rates slowed down significantly in the years after the adoption of import substitution, which was in distinct contrast with the initial surge in economic growth (Bruton, 1968).

Some of the studies on international trade indicate that the effects of international trade in the economy could arise from the implementation of strategic trade policy. According to Feeney and

Hillman (1998), governments may be able with strategic trade policy instruments to influence the interactions between the firms to the extent that profits shift from foreign to domestic firms.

However, the discussion on strategic policy in this study only focuses on import tariffs since they are more relevant to the study countries (Botswana, Lesotho and South Africa).

In the context of the current study, strategic trade policy becomes relevant in that South Africa, Lesotho and Botswana in that these countries apply import tariffs as one of their strategic policy tools (see Chapters 2, 3 and 4 of this study). Regarding import tariffs, their economic effects vary depending on whether a give tariff under consideration is binding or applied tariff. Applied tariffs are current, observable tariffs, while binding tariffs are set at an agreed rate through trade negotiations. Because applied tariffs are generally lower than binding tariffs, they could have more positive effects in the economy. While binding tariffs are sometimes negatively associated with a country's market power, applied tariffs can easily be adjusted, so resulting in minimal negotiation costs (Beshkar *et al*, 2015).

Even though strategic trade policy instruments are widely used in various economies, some studies have shown that they do not always lead to the desired outcomes. For instance, although import tariffs are often imposed with the intention of protecting domestic industries or enhancing government revenue, their imposition may result in negative consequences in the imposing country. One of the negative effects of import tariffs is that they could result in the reduction of economic welfare as output falls. Import tariffs could also raise the domestic price of goods and services, which could cause reductions in consumer surplus or social welfare (Zhang, 2014).

Moreover, strategic trade policy has also been linked to retardation in economic growth. Deriving their views from the dynamic equilibrium model of trade, Segerstrom *et al* (1990) showed that there is a strong connection between protectionist trade policies and slower economic growth. Although several arguments have been advanced in favour of international trade, the principle of international trade is not free of limitations. Krugman (1987) argued that the notion of free trade is limited by several factors, most of which tend to reduce the interventions that are undertaken in trade policy. These include uncertainty about appropriate policies, predatory entry that erodes the gains from trade, and diversion of resources at sectoral level.

5.5 Trade openness and economic growth: empirical evidence

5.5.1 Trade openness and economic growth: empirical evidence from time-series studies

Various studies of time series or cross-sectional nature have examined the relationship between trade openness and economic growth. Most of the earlier works investigating the link between trade openness and economic growth are cross-sectional, with relatively fewer single-country studies by comparison. While previous cross-sectional studies have provided some evidence on the link between trade openness and economic growth, time series studies are deemed to be more useful. Karras (2002: 3) showed that compared with times-series evidence, evidence mostly drawn from cross-sectional data is mixed and inclusive.

Some views in favour of time-series evidence indicate that each country is structured differently, justifying the need for country-specific empirical investigation. Rao and Rao (2009: 1653) indicated that even though the scope of cross-sectional studies is wide, the limitation is that such studies assume similar structures for all countries sampled. So within the cross-sectional frame-work, it becomes difficult to recommend policy prescriptions specifically for each one of the countries in the sample. The next discussion reviews some of the time series studies on trade openness and economic growth.

In one of the recent time series studies on trade openness and economic growth, Makun (2017) found that trade openness has a robust, positive impact on economic growth in Malaysia, indicating the significance of trade openness in the economy. In a different study based on eight West African Monetary Union countries, Agbetsiafa (2010) examined whether trade openness caused real GDP per capita growth. Three measure of trade openness were used: the ratio of total trade to GDP, the ratio of imports to GDP, and the ratio of export to GDP. The results revealed that there was a long-run relationship between trade openness and economic growth. However, differing directions of causality between trade openness and economic growth were observed when different measures of trade openness were employed. Despite the difference in the direction of causality, the overall conclusion was that trade openness had a positive effect on economic growth in 50% of the sampled countries.

Hassan (2005) investigated the relationship between trade openness and economic growth in Bangladesh using the percentage share of trade in GDP over the period 1974-2003 as a measure of trade openness. The results revealed a long-run equilibrium relationship between trade openness and economic growth in Bangladesh. On the direction of causality, the study found that there was unidirectional causality from trade openness to economic growth. Hence, these

empirical findings indicated that trade openness plays an important role in economic growth in Bangladesh.

Using additional explanatory variables to augment the Solow growth equation, Rao and Rao (2009) estimated the effects of trade openness on economic growth in Fiji. Employing the ratio of exports plus imports to GDP as a measure of trade openness, they found that a 10% increase in trade openness caused a 2% increase in economic growth in Fiji. The results also revealed that about 70% variation in economic growth rate was explained by factor accumulation and trade openness. These results confirmed the positive effect of trade openness on Fiji's economic growth.

Focusing on Ghana and Nigeria, Osabuohien (2003) analysed the effect of trade openness on economic performance. He used the ratio of trade to GDP as a proxy for the degree of trade openness for the period 1975-2004. The results revealed that trade openness had a positive effect on economic growth in each of the countries studied, but with higher effects in Ghana than in Nigeria. The findings thus indicated that trade openness was an important stimulator of economic performance in these economies.

Sakyi (2011) conducted a study to examine the effect of trade openness and foreign aid on economic growth in Ghana using the share of exports and imports in GDP as a measure of trade openness. His results showed that the effects of trade openness and of foreign aid on economic growth were positive and statistically significant in the short run as well as in the long run.

Focusing on the separate roles of exports and imports, Awokuse (2008) investigated whether trade openness stimulated economic growth in Argentina, Columbia and Peru. Using a neoclassical growth modelling framework, the study employed two proxies for trade openness: real exports and real imports. The results provided strong evidence in support of import-led growth and a modest amount of export-led growth. Thus, both exports and imports were demonstrated to contribute positively to economic growth in these South American countries.

In a study investigating the long-run relationship between trade openness and economic growth, Klasra (2011) used the ratio of total trade to GDP as a measure of trade openness for Pakistan and Turkey. The results confirmed that there was a positive long-run relationship between trade openness and economic growth in Pakistan, but not in Turkey.

In a recent investigation of the effects of trade openness on economic growth, Musila and Yiheyis (2015) found that trade openness had a positive effect on economic growth in Kenya, although

not significantly so. They used two indicators to capture the effect of trade openness on economic growth: the growth rate in the openness measure as well as the intermediate variable that captured the interaction between growth in physical capital stock and growth in trade openness. Their results indicated that the effect of trade openness on economic growth came through interaction with physical capital growth.

In another study, Hye and Lau (2015) investigated the link between trade openness and economic growth in India. The study employed the trade openness index to measure the effect of trade openness on economic growth. The results showed that in the short run, trade openness had a positive effect on economic growth. However, in the long run, trade openness had a negative effect on economic growth.

While several studies conclude that trade openness has a positive effect on economic growth, Adhikary (2011) found that trade openness had a negative but diminishing influence on economic growth. Using the ratio of export and imports over GDP as a proxy for the degree of trade openness in Bangladesh for the period 1986-2008, the results showed a significant negative relationship between trade openness and economic growth.

Table 5.2 provides a summary of various time-series studies that examine the relationship between trade openness and economic growth.

Table 5.1 Summary of time series studies on trade openness and economic growth

Study	Sample	Measure(s) of trade openness	Effect of trade openness
Makun, (2017)	Malaysia	Exports plus imports to GDP	Significant, positive
Agbetsiafa (2010)	eight West African Monetary Union countries	exports plus imports to GDP; imports to GDP; exports to GDP	significant, positive in 50% of sampled countries
Hassan (2005)	Bangladesh	exports plus imports to GDP	significant, positive
Rao and Rao (2009)	Fiji	exports plus imports to GDP	significant, positive
Osabuohien (2007)	Ghana and Nigeria	exports plus imports to GDP	significant, positive
Klasra (2011)	Pakistan and Turkey	exports plus imports to GDP	significant, positive
Awokuse (2008)	Argentina, Columbia and Peru	real exports; real imports	significant, positive
Musila and Yiheyis (2015)	Kenya	growth rate in ratio of exports plus imports; interaction term	insignificant, positive

Study	Country/region	Measure(s) of trade openness	Effect of trade openness
Hye and Lau (2015)	India	trade openness index	significant, positive in the short-run; significant, negative in the long run
Adhikary (2011)	Bangladesh	exports plus imports to GDP	diminishing, negative

5.5.2 Trade openness and economic growth: empirical evidence from cross-sectional studies

There is extensive literature conducted on trade openness and economic growth both in developed and developing countries. In one of the recent studies conducted in sub-Saharan Africa, Zahonogo (2017) found that trade openness has a positive impact on long run economic growth but only up to a threshold.

Employing data from 1950 to 1992 for 56 different countries, Karras (2002) found that trade openness had a significant positive effect on economic growth. The ratio of total trade to GDP was used to measure trade openness. The results showed that a 10% increase in trade openness caused a permanent 0.5% rise in the real growth rate of GDP per capita.

Using a group of 19 OECD countries, Dar and Amirkhalkhali (2010) investigated the implications of trade openness on economic growth. Their study used the ratio of total trade to GDP as a measure for the degree of trade openness. The results indicated that there was some relative importance of trade openness on economic growth, though with variations across the selected countries.

Karras (2003) analysed the effects of trade openness on economic growth using two panel data sets drawn from 56 countries covering the period 1951-'98, and from a further 105 countries over the period 1960-'97. Evidence showed that a 10% increase in trade-to-GDP ratio led to permanent increases of about 0.25% to 0.3% in the real growth rate of GDP per capita. These results led to the conclusion that trade openness has a positive and permanent effect on economic growth.

Skipton (2007) used the trade openness index to measure the effect of trade openness on long-run economic growth using a cross-section of 20 countries. These countries comprised most open and least open economies. The findings of the study showed that there was a positive relationship between trade openness and long-run economic growth. The positive effect of trade openness was attributed to the ability of trade openness to create new opportunities through removing constraints to investment as well as by allowing transfers of knowledge and technology.

In another study that intended to establish whether trade openness has some effect on economic growth, Yanikkaya (2003) used different groups of measures of trade openness in cross-country regressions covering more than 100 developed and developing countries. The measures of trade openness were categorised based on trade volumes, trade restrictions, bilateral payments

arrangements among IMF members, and trade barriers. The results revealed that there was a positive relationship between trade openness and economic growth when trade intensity measures were used. When trade restrictions were used, evidence showed that trade barriers were positively associated with economic growth in most specifications, particularly in developing countries.

Wacziarg and Welch (2008) carried out an investigation on the relationship between trade openness and economic growth using the 1995 Sachs and Warner openness indicators. The analysis was carried out on 24 developing countries over the period 1950-'98. It was found that countries that made use of open trade policies experienced higher economic growth than before they opened their economies. This evidence indicated the positive association between trade openness and economic growth in developing countries.

Using data from 17 developing countries to examine the link between trade openness and economic growth, Okuyan *et al* (2012) detected a positive long-run relationship between trade openness and economic growth in six countries. Their results also showed that in four countries, the direction of causality ran from trade openness to economic growth. In four other countries, causality ran from economic growth to trade openness.

More recently, Sakyi *et al* (2014) explored the linkage between trade openness and economic growth in 115 developing countries, which were grouped into low-income countries, upper-middle-income countries and lower-middle-income countries. They employed composite trade shares as a measure of the degree of trade openness. The results confirmed the existence of a long-run relationship between trade openness and economic growth in the entire sample of developing countries. It was further found that the link between trade openness and economic growth was much higher for the upper-middle-income countries than for lower-middle-income countries.

Chang and Mendy (2012) examined the effects of trade openness on economic growth in Africa focusing on 36 countries. The study specified three types of regression. In the first two specifications, total amount of exports and total amount of imports were used to measure the effect of trade on economic growth. The third specification used the ratio of the sum of exports and imports to GDP as a measure of trade openness. The results indicated that there was a positive relationship between trade openness and economic growth. The exports and imports were also found to be positively related to economic growth.

Applying cross-sectional analysis to 42 sub-Saharan African countries, Babatunde (2011) investigated the relationship between trade openness, foreign direct investment (FDI) and economic growth in these countries. The results indicated that trade openness played a significant role in encouraging FDI in sub-Saharan Africa. It was further concluded that FDI together with infrastructural development, contributes positively to economic growth. In a similar study, Kandiero and Chitiga (2006) used cross-sectional data from 50 African countries to analyse the effect of openness to trade in these economies. The results revealed that foreign direct investment responds positively to increased trade openness, which led to the conclusion that greater openness to trade had a positive effect in the economy.

In another study based in sub-Saharan Africa, Brückner and Lederman (2012) examined whether increased openness to international trade led to higher economic growth in this region. The study measured trade openness using the sum of exports and imports over purchasing power parity GDP. The findings led to the conclusion that increased trade openness affected economic growth positively in sub-Saharan Africa.

Re-examining the 1997 Sachs and Warner model of economic growth, Hoeffler (2002) investigated the relationship between trade openness, investment and economic growth in sub-Saharan Africa over the period 1965-'90. The results revealed a positive and significant coefficient of trade openness and a negative and significant coefficient of the interactive term. This evidence led to the conclusion that more trade openness leads to higher levels of per capita GDP in the steady state and with a faster convergence towards the steady state.

Chen and Gupta (2006) examined the effect of trade openness on economic growth in the Southern African Development Community (SADC) for the period 1990-2003. Their study used the ratio of exports plus imports to GDP as a measure of the level of trade openness. The results showed that trade openness has a significant positive effect on economic growth in the SADC region. This finding led to trade openness being considered as one of the most critical factors contributing to economic growth in the SADC region.

Menyah *et al* (2014) used 21 African countries to analyse the causal relationship between financial development, trade openness and economic growth over the period 1965-2008. They measured the degree of trade openness using the ratio of total trade to GDP. From their findings, it emerged that there was hardly any causality between financial development, trade openness and economic growth. The results showed very weak evidence in support of the trade-led growth

hypothesis. With these results, the conclusion was that trade openness had not had a significant influence on economic growth in the countries investigated.

López (2005) employed plant-level data to examine whether openness to trade increased productivity and economic growth. His findings challenged the traditional view that openness to trade leads to higher levels of productivity and economic growth. The argument was that the causal link between trade openness and economic growth runs from economic growth to trade openness, not the other way round, which was the hypothesis in many studies.

Table 5.2 presents a summary of various cross-sectional studies that investigated the relationship between trade openness and economic growth.

Table 5.2 Summary of cross-sectional and panel studies on trade openness and economic growth

Author(s)	Countries/region	Measure(s) of trade openness	Effect of trade openness
Karras (2002)	56 countries	exports plus imports to GDP	significant, positive
Dar and Amirkhalkhali (2010)	19 OECD countries	exports plus imports to GDP	significant, positive
Karras (2003)	56 countries; 105 countries	exports plus imports to GDP	significant, positive
Skipton (2007)	most open economies; least open economies	trade openness index	significant, positive
Yanikkaya (2003)	more than 100 developed and developing economies	exports plus imports to GDP; imports penetration ratio, exports ratio in GDP.	significant, positive
Chang and Mendy (2012)	36 African countries	exports plus imports to GDP	significant, positive
Wacziarg and Welch (2008)	24 developing countries	Sachs and Warner openness index	significant, positive

Babatunde (2011)	42 sub-Saharan African countries	exports plus imports to GDP	significant, positive
Kandiero and Chitiga (2006)	50 African countries	exports plus imports to GDP	significant, positive
Brückener and Lederman (2012)	sub-Saharan Africa	exports plus imports to GDP	significant, positive
Hoeffler (2002)	76 countries	Sachs and Warner openness index	significant, positive
Chen and Gupta (2006)	13 SADC countries	exports plus imports to GDP	significant, positive
Okuyan *et al* (2012)	17 developing countries	exports plus imports to GDP	significant, positive in 6 countries.
Menyah *et al* (2014)	21 African countries	Exports plus imports to GDP	insignificant impact
Sakyi *et al* (2014)	115 developing countries	composite trade shares	significant, positive

5.5.3 Outward-oriented trade policy and economic growth: empirical evidence

Although there are some exceptional cases, there is growing evidence in support of the view that outward-oriented policies assist in the attainment of higher economic growth. For example, several studies based in developing countries have found that outward-oriented countries grow much faster than during the period when they were inward-oriented (see Balassa, 1985; Salvatore and Hatcher, 1991; Dollar, 1992; and Edwards, 1992).

Balassa (1985) investigated the effect of initial trade policy stance on economic growth using 43 developing countries. Trade orientation was measured by deviations of actual values of per capita exports from their hypothetical values. The results showed that the initial outward-oriented policy stance together with export promotion had helped increase economic growth, particularly during a period of severe external shocks.

Singer and Gray (1988) used the Spearman rank correlation coefficient to analyse the relationship between trade policy and economic growth in developing countries. Their results indicated that outward orientation could only lead to higher economic growth if the external demand for exports is strong due to favourable world market conditions. This finding led to the conclusion that outward-oriented trade policy is not necessarily a valid policy recommendation that is applicable for all conditions and across all countries.

Salvatore and Hatcher (1991) investigated the effect of trade orientation on economic growth using a cross-sectional analysis for four groups of developing countries. They used growth in the value of real exports as a measure of outward orientation, while the growth rate of real industrial production was used to measure inward orientation. The results were inconclusive with regard to the hypothesis that outward orientation leads to higher economic growth. This is because the coefficient of the real export growth was found to be robust and significant for inward-oriented countries, but not for outward-oriented countries.

Dollar (1992) used 95 least developed countries in a study examining whether outward-oriented developing economies grow much faster. The study measured outward orientation using variability and distortions in the real exchange rate. A positive and statistically significant relation-ship between outward orientation and economic growth was derived from the results. This finding indicated that outward-orientated economies tend to experience higher economic growth because of lower variability and distortions in real exchange rate.

Edwards (1992) employed a cross-country analysis in which different indicators of trade orientation were used to test whether trade orientation is related to economic growth. The indicators of trade orientation that were used included trade intervention indexes that were derived from Leamer (1988). Trade openness indexes were also used in the analysis. The results showed that economies that are more open to trade grow much faster than those with more trade distortions.

Easterly (1993), investigated the effects of trade policy in 75 developing countries using various proxies for distortionary policies. Black market exchange rates, price controls and differential taxes and tariffs were used to capture the effects of policy distortions. The empirical results revealed that depending on the elasticity of substitution, distortions brought by different polices have negative effects on economic growth, particularly when such distortions affect the variance of the relative prices of inputs.

Pritchett (1996) used six different measures of trade policy stance in a study examining the role of outward-oriented trade policy on economic performance in least-developed countries. The indicators of trade policy stance employed included the non-tariff barrier (NTB) frequency, average tariffs, structure-adjusted trade intensity, Leamer's openness index, price distortion, and Leamer's trade distortion index. The results showed no robust relationship between outward-oriented trade policy and economic growth or export performance.

Table 5.3 provides a summary of different studies on outward-oriented trade policy and economic growth.

Table 5.3 Empirical evidence on outward-oriented policy and economic growth

Author(s)	Countries/region	Measure(s) of trade orientation	Conclusions
Balassa (1985)	43 developing countries	deviations in exports	Outward-oriented trade policy improves economic growth
Singer and Gray (1988)	developing countries	Spearman rank correlation coefficient	Outward-oriented trade policy improves growth in some, but not all countries
Salvatore and Hatcher (1991)	four groups of developing countries	growth in real exports; growth rate of real industrial production	Inconclusive results
Dollar (1992)	95 least developed countries	real exchange rate distortions	Outward-orientated economies experience higher economic
Edwards (1992)	developing countries	intervention indexes; overall openness indexes	Economies with fewer trade distortions grow much faster
Easterly (1993)	75 developing countries	black market exchange rates; price controls; differential taxes; tariffs	Trade policy distortions have negative effects on economic growth
Pritchett (1996)	least developed countries	NTB frequency, tariffs, trade intensity, Leamer's openness index, price distortion	No robust relationship between outward-oriented trade policy and economic growth

5.6 Conclusion

This chapter provided a discussion on theoretical and empirical reviews of trade openness and economic growth. The examination of the link between trade openness and economic growth shows that there are various channels through which trade openness may affect economic growth. These channels include government policy, allocation and distribution, technological transmission, redundancy effects, integration effects, and scale effects. The theories of international trade reviewed show that international trade may have a positive impact on economic growth. Based on various theories of economic growth, it is revealed that the relationship between international trade and economic growth is more relevant to the endogenous growth theories, and not so much to the neoclassical growth theories. From the empirical review, while some studies found that trade openness leads to higher economic growth, other empirical evidence shows that there is no significant relationship between trade openness and economic growth. It is also evident from the studies reviewed that there is no consensus on the measurement of trade openness. The review of trade policy in sub-Saharan Africa shows how the trade regime in some countries in the region has evolved from import substitution industrialisation to export promotion.

CHAPTER 6

EMPIRICAL MODEL SPECIFICATION AND ESTIMATION TECHNIQUES

6.1. Introduction

This chapter provides a discussion on the methodology for the current study. The discussion includes theoretical and empirical underpinnings regarding the relationship between trade openness and economic growth. This chapter is organised into four sections. After the introduction, Section 6.2 discusses the measurement of trade openness, while Section 6.3 focuses on theoretical model specification. Section 6.4 provides a discussion on estimation techniques, which include unit root tests, the cointegration test and the error correction model. Thereafter, Section 6.5 provides an analysis of data and variable description, while Section 6.6 concludes the chapter.

6.2 Measurement of trade openness

Although the literature provides various ways to measure trade openness, there is still no consensus measurement of trade openness. This absence of a unanimous direct measure of trade openness has mostly been driven by the fact that the very proxies of trade openness are defined in many ways (Klasra, 2011). For instance, trade protection, which may be used as a proxy for trade openness, may be defined by different measures including tariffs, non-tariff barriers, and requirements for standards (Spilimbergo *et al*, 1999).

Based on the restrictiveness of trade policy, Okuyan, Ozun and Erbaykal (2012) define trade openness as a condition that reflects the extent to which an economy has removed restrictions on the international movements of goods, services, capital and labour. On the other hand, other studies define trade openness based on the orientation of trade policy. Conventionally, trade policy orientation is measured by the degree to which there is export bias emanating from protective and incentive measures that are applied in an economy (Edwards, 1993). In this regard, the elimination of the anti-export bias indicates the extent to which trade openness affects economic growth. However, Pritchett (1996) argues that trade openness is not defined as a policy measure, but rather as trade intensity of a given country.

Considering the existing measures of trade openness, the ratio of total trade to GDP may be regarded as the conventional measure of trade openness, which previous empirical studies use in their empirical investigation. Evidence shows that the use of trade ratio to GDP as a measure of openness is common in several studies investigating the relationship between trade openness

and economic growth (for example see Barro, 1999; Bahmani-Oskooee and Niroomand, 1999; and Yanikayya, 2003).

Apart from the conventional measure of trade openness derived from the ratio of total trade to GDP, there is also a modified measure of trade openness, which is known as *real openness*. Alcala and Ciccone (2004) developed the real openness measure, which they define as the ratio of exports plus imports to GDP relative to the purchasing power parity GDP. Their argument for using the real openness measure is that this measure of trade openness is preferable on theoretical grounds compared with the conventional nominal measure of trade openness.

Trade openness may also be measured using the ratio of exports in GDP or by using the growth rate of exports. According to Ukpolo (1994), the growth of exports is believed to have both direct and indirect effects on economic growth. Balassa (1982) uses the rate of growth of exports and finds strong support for the export-led growth hypothesis. In addition to exports-based measures of trade openness, imports-based measures have also been used in previous studies. The imports-based measures of trade openness include the ratio of imports to GDP, changes in the ratio of imports to GDP, or the import penetration ratio. The import penetration ratio is defined as the percentage share of imports in domestic consumption, whereas the changes in the ratio of imports to GDP indicate the extent to which restrictions on trade affect imports (Balassa and Balassa, 1984).

In addition to trade-based measures, composite indices may also be used to measure trade openness. One of the earlier indices of trade openness developed is the outward orientation index based on the World Bank World Development Report (1987). According to Edwards (1989), the outward orientation index indicates the priority that is given to the exports by policy. Greenway and Nam (1988) use an outward orientation index and find that outward-oriented economies exceeded inward-oriented economies in economic performance. The other index of trade openness is the Sachs and Warner (1995) openness index, which captures the effects of trade policy in the economy. This index is a combination of information on non-tariff barriers to trade, average tariff rates, black market premium, democracy, and government controls on exports (Sachs and Warner, 1995). Employing the Sachs and Warner (1995) openness index, Vamvakidis (1998b) found a positive impact of trade openness on economic growth for the sample period, 1970-'90.

Leamer (1988) used trade data to derive an index of trade openness. This openness index measured the relative restrictiveness of trade barriers. Leamer's openness index was constructed

using the difference between the actual trade intensity ratio and the predicted trade intensity ratio. Edwards (1997) employed nine different measures of trade openness including Leamer's openness index in his empirical analysis of the relationship between trade openness and economic growth. The results showed that trade openness had a positive impact on economic growth. This led to the conclusion that countries with a lower degree of external distortions tend to have faster productivity growth.

Skipton, Gwartney and Lawson (2001) developed the Trade Openness Index, designed to measure the extent to which policies affected international trade. This index comprised four components: tariff rates, the black-market exchange premium, restrictions on capital movements, and the difference between the actual size and the expected size of the trade sector. The index was constructed in such a way that higher trade openness index ratings indicated greater freedom of exchange in the markets. It was found that a strong positive relationship existed between trade openness and the growth rate of the real per capita GDP.

The black-market premium is another indicator of trade openness that has been employed in previous studies. Levine and Renelt (1992) used black market premium exchange rate to measure the effects of trade openness on economic growth in their analysis of determinants of economic growth. They found that countries with a lower black-market exchange rate premium grew faster than average. The black-market premium is considered to have positive effects on economic growth.

Although there is no consensus on the definition and measurement of trade openness, there is evidence in support of the role of trade openness in economic growth. It has been shown in various studies that a long-run equilibrium relationship exists between trade openness and economic growth (see Edwards, 1998; Karras 2003; Hassan 2005). This association between trade openness and economic growth arises because there is a tendency for a country that is more open to trade to experience faster economic growth (Andersen and Babula, 2008).

6.3 Empirical model specification

The current study investigates the dynamic relationship between trade openness and economic growth within the time-series framework based on the autoregressive distributed lag modelling approach. In various empirical studies, trade openness is measured by various indicators, some of which are trade-based indicators while others are indices of trade openness. Among the trade-based measures of trade openness, the ratio of exports to GDP has become a conventional measure of trade openness. This measure of trade openness has been used in a number of studies related to trade openness and economic growth (see Yanikkaya, 2003). Other studies use the import share in GDP as a proxy for trade openness (see Jin, 2000).

The starting point of analysis in this section involves the specification of the benchmark empirical model that tests the relationship between trade openness and economic growth. The specification is:

$$GROWTH = F(OPEN) \quad \text{.....(6.1)}$$

where $GROWTH$ is the growth rate in the real GDP per capita, and $OPEN$ represents the measure of trade openness, which is given by the ratio of total trade to GDP. Bahmani-Oskooee and Niroomand (1999) used a similar benchmark model to investigate whether trade openness has any long-run relationship with economic growth. Their results indicated that trade openness is positively related to economic growth.

In the current study, economic growth is the dependent variable in the growth equation. This variable is proxied by the annual growth rate in real GDP per capita. In comparison with conventional GDP growth rate, the real GDP per capita is deemed to be more reliable in the context of the current study. This is because the real GDP per capita adjusts for differences in population size. Thus, in a comparative study like this one, the growth rate of real GDP per capita is considered a better measure of economic growth. In a study based in sub-Saharan Africa, Ghura and Hadjimichael (1996) employed real GDP per capita as a proxy for economic growth.

The current study uses four proxies to measure trade openness. These proxies include the ratio of total trade to GDP, the ratio of real exports to GDP, the ratio of real imports to GDP, and the trade openness index. The choice to use the ratios of total trade to GDP, exports to GDP, and

imports to GDP, was motivated by previous empirical investigations including those by Yanikkaya (2003), and Chang and Mendy (2012).

Although previous studies on trade openness and economic growth have developed various indicators of trade openness, the current study uses the abovementioned proxies because the ratio of total trade to GDP has the advantage of being associated with the level of income. The other advantage of using the ratio of total trade to GDP is that it shows the intensity of trade in relation to a country's production capacity. Moreover, the ratio of total trade to GDP serves as a vital indicator since it represents the importance of trade in the success of an economy, particularly in a modern economy (Department for Business Innovation and Skills, 2014). In this view, the ratio of total trade to GDP is expected to have a positive impact on economic growth.

The second indicator of trade openness, which is the ratio of imports to GDP, was chosen because it separates the share of exports in total trade from that of imports. This division leaves only the effect of the change in imports, which is considered to capture the degree of protection in an economy. The ratio of imports in GDP is regarded as a more appropriate measure of trade openness (Jin, 2000).

Following Yanikkaya (2003), the current study also employs the share of the real exports in GDP as a third indicator of trade openness based on the argument that the performance of exports in GDP is also considered to reflect the degree of trade openness. However, apart from the ratio of exports to GDP, there are other export-based indicators of trade openness that have seen used in previous studies. Some studies have used growth rate of exports to GDP as a measure of trade openness (see Balassa 1982) while others employed real exports (see Awokuse 2008; Menyah, Nazlioglu and Wulde-Rufael, 2014).

In addition to the abovementioned indicators of trade openness, the current study also makes use of an index of trade openness, which is derived from information on country size and location. The advantage of using this index is that it controls for differences in country-specific characteristics like size and location. By controlling for differences in country size and location, a more meaningful comparison regarding trade openness and economic growth between different countries is enabled (United Nations Conference on Trade and Development [UNCTAD], 2012a). This index is very appropriate in the context of SACU countries, which are characterised by different levels of country size and locational advantage.

Following with modifications, UNCTAD (2012a) and Frankel and Romer, (1999), an index of trade openness is constructed in the current study using an OLS regression. According to Frankel and Romer (1999), country size and population size are beneficial to trade. Hence, the openness-growth relationships may occur through the effects of geographic location, population size and country size. However, although the role of geography in economic development and growth has been raised in previous studies (for example Gallup, Sachs and Mellinger, 1998; Frankel and Romer, 1999), the current study differs from previous studies in the definition of geographic variable used in the construction of the trade openness index. In the current study, the choice to use arable land area as a proxy for geography was driven by the differences in climate and topography between the three selected countries, which consequently affects the amount of land available for economic development.

The OLS regression used in the estimation of the trade openness index in the current study is specified as follows:

$$Trade\ Openess\ Index = \alpha_0 + \alpha_1 y_i + \alpha_2 Area_i + \alpha_3 Pop_i + u_i \quad \text{.....(6.2)}$$

Where y_i is GDP per capita; α_0 is the constant, $Area_i$ is the measure for country size; Pop_i is the population size in country i; while u_t is the error term. α_1 , α_2 and α_3, are the respective coefficients of GDP per capita, country size, and population size.

To derive the index of trade openness, the OLS regression specified in equation 6.2 is first estimated for each country, and the residuals from the single equation regression are then used as proxy variables representing residual openness. The current study expects that the trade openness index has a positive impact on economic growth.

This study includes four control variables in addition to the measures of trade openness. These are: investment, government consumption, inflation rate and financial development. The choice of these variables was largely influenced by endogenous growth framework, according to which the long-run economic growth is influenced by several factors that capture the effects of developments in various sectors of the economy (see Fischer, 1992).

Considering the first control variable, investment, it is measured by the share of investment in GDP. The reason for including investment is that it captures the extent to which capital affects

economic growth. Moreover, in the essence of the *AK* models of endogenous growth, an increase in capital is expected to result in a proportionate increase in output (Taylor, 2007). Other studies that have investigated the empirical relationship between economic growth and a variety of other macroeconomic factors have also used investment as one of the control variables (see Chang and Mendy 2012; Edwards 1992; and Levine and Renelt, 1992). Investment is expected to have a positive impact on economic growth.

The second control variable, government consumption, is measured by the ratio of government consumption to GDP. Although there is no unanimous conclusion on the effect of government consumption on economic growth, this variable has been included in other studies on trade openness and economic growth (see Eris and Ulasan, 2013; and Karras, 2003). One of the arguments relating to the role of government expenditure is that the size of government expenditure plays a significant role in economic activity. In this regard, higher capital outlays are associated with more resilient growth, while higher current expenditures are associated with less favourable economic performance (Gupta *et al*, 2005). Thus, given the adequacy of policies, the composition of government expenditure can have a significant effect on economic growth. Nevertheless, from a theoretical point of view, a larger government size is unfavourable to efficiency and economic growth (Ram, 1986). The expectation from the current study is that government consumption is negatively related to economic growth.

The third control variable, inflation rate, is measured by the average annual change in the consumer price index. The rationale for including the inflation rate as one of the control variables is that evidence shows that in both fast-growing and slow-growing sub-Saharan African countries, high inflation rates tend to exert a negative influence on economic growth (see Bittencourt *et al*, 2015). Moreover, high inflation rate also indicates macroeconomic uncertainties that are likely to cause a decline in economic growth (Eris and Ulasan, 2013). In this regard, the inflation rate is expected to be negatively related to economic growth.

Lastly, financial development is the fifth control variable included in the current study, which is measured by the ratio of M2 to GDP. The inclusion of financial development in the current study follows Bittencourt (2012). Generally, financial development is expected to have a positive impact on economic growth. However, in the presence of information asymmetries that restrict access to short-term finance by small entrepreneurs, the indicator of financial development could be related

negatively to economic growth (Bittencourt *et al*, 2015). In the current study, financial development is expected to have a positive relationship with economic growth

The general empirical model

The empirical model used to investigate the relationship between trade openness and economic growth in this study is based on Jin (2000); Yanikkaya (2003); and Chang and Mendy (2012). Jin (2000) examined the impact of trade openness and economic growth in East Asian countries using the following model:

$$GDP = F(OPEN, G, PSTAR, M1) \quad \text{.....(6.3)}$$

where GDP is the real gross domestic product; $OPEN$ is the measure of trade openness given by the imports/GDP ratio; G represents the real government consumption; $PSTAR$ is the foreign shock proxied by the world consumer price index; and $M1$ is the narrowly defined money supply.

To arrive at the general specification of the empirical model for the current study, some modifications were made based on the relevance of the variables to the countries being investigated. First, investment (INV/GDP) was introduced into the model. The inclusion of an investment variable in the current empirical model emanates from the trade-induced investment-led growth hypothesis, according to which trade may affect growth through investment channels. The argument is that increased trade openness, resulting from reductions in the level of trade protection, could reduce the cost of capital, resulting in an increase in the demand for capital and as well as on the return on investment. Consequently, the return on investment would increase, leading to trade-induced investment-led growth (Baldwin and Seghezza, 1996). The other reason for including investment in the current specification is that investment has been identified as one of the factors that affect economic growth in sub-Saharan Africa (see Ghura and Michael, 1996).

Apart from introducing investment to the model, the second modification made is the inclusion of a different indicator of financial development, $(M2/GDP)$, in place of $M1$. The third modification to the model involves the inclusion of inflation rate $(INFL)$ in place of foreign shock $(PSTAR)$. The inclusion of $M2/GDP$ and $INFL$ in the current investigation follows Bittencourt *et al* (2015), who identified $M2/GDP$ratio and inflation rate as being significant in influencing economic growth in a

group of 15 sub-Saharan African countries that also included Botswana, Lesotho and South Africa.

Given the above adaptations, the specification of the general empirical model for the current study is:

$$\boldsymbol{GROWTH = F(OPEN, INV/GDP,\ GOV/GDP,\ INFL,\ M2/GDP)} \quad \textbf{(6.4)}$$

where $GROWTH$ is the growth rate in the real GDP per capita; $OPEN$ represents trade openness proxies (OPEN1, OPEN2 , OPEN3 and OPEN4); (INV/GDP) is investment; GOV/GDP is a measure of final government consumption expenditure; (INF) is inflation rate; and $(M2/GDP)$ represents financial development. The term ε_t represents the error term, while α_0 is the constant term. β_1.....β_5 are the coefficients.

From the general specification in Equation 6.3, the study derived four different equations, each employing a different indicator of trade openness.

Specification for the four equations is done for each one of the three study countries – South Africa, Lesotho and Botswana.

6.4 Estimation techniques

6.4.1 Unit root tests

To conduct the ARDL bounds testing approach to cointegration, unit root tests were conducted to check whether the variables are integrated of order zero or order one. In this study, three types of unit root tests are used: the Dickey-Fuller GLS test, the Perron test, and the Phillips-Perron Test.

The DF GLS test (DF-GLS) is a unit root test that allows for the change in an unobserved trend in the data to occur (see Elliot *et al*, 1996). The DF-GLS test uses two forms of equations that examine the presence of unit root. These are the demeaned form and the detrended form of the DF-GLS test.

The Perron (1989) test splits the sample into two parts to allow for testing for unit roots in the presence of a structural change at time period $t = \tau + 1$ (Enders, 2004). According to Perron (1990), standard unit-root tests tend to be biased toward non-rejection of the hypothesis of a unit root when the full sample is used. Moreover, in the presence of structural breaks, the resulting crash in the macroeconomic variables could induce a permanent effect on the mean of the affected variables, which also implies a shift in the intercept (see Perron, 1990; Enders, 2004). This has led to the incorporation of structural breaks in unit root tests.

The Phillips-Perron (1988) test allows for testing unit in models with a fitted drift and a time trend so that they may be used to discriminate between unit root nonstationarity and stationarity about a deterministic trend. As indicated by Phillips and Perron (1988), the approach in the Phillips-Perron test is nonparametric with respect to nuisance parameters, which therefore accommodates a wide range of weakly dependent and heterogeneously distributed data.

6.4.2 The autoregressive distributed lag (ARDL) approach to cointegration

The ARDL bounds test for cointegration is based on the significance of the t-ratio of the coefficient of the lagged dependent variable (source). The choice of this type of cointegration test was driven by some of its advantages over other approaches to cointegration, which among others include the Engle and Granger (1987) two-step approach and the Johansen and Juselius (1990) maximum likelihood approach.

The first advantage of the ARDL approach is that unlike other cointegration tests whose limit distribution depends on nuisance parameters, the power of this test does not suffer in finite samples when invalid restrictions are imposed, as is the case with the Engle-Granger (1987) approach and the Hansen (1990) cointegration test (Banerjee, Dolado and Mestre, 1998). Secondly, due to its finite sample properties, the ARDL bounds testing approach to cointegration performs better even in smaller samples. Consequently, in the presence of a smaller sample size, the bounds testing approach to cointegration is preferable since it is robust for small samples (Tang, 2004). Thirdly, the ARDL approach helps to avoid problems of serial correlation and endogeneity (Ghatak and Siddiki, 2001).

The fourth advantage is that apart from having better power properties, the ARDL approach also allows for testing of the existence of a long-run relationship between the variables without

requiring them to have the same order of integration. Thus, the underlying variables could be $I(0)$, $I(1)$or mutually cointegrated (Pesaran and Shin, 1999). Fourthly, with the ARDL approach, the OLS estimators of short-run parameters are $\sqrt{T}$ consistent (Pesaran and Shin, 1995). This implies that the OLS parameter estimates converge to their true values at rate $\sqrt{T}$, where T represents the sample size (Bentzen and Engsted, 2001). Moreover, the ARDL approach also allows for the estimation of long- and short-run parameters simultaneously, removing problems associated with omitted variables and autocorrelation. The fifth advantage of the ARDL approach is that it corrects for possible endogeneity among the explanatory variables (Wolde-Rufael, 2010:53).

The ARDL model for the current study

In line with Pesaran, Shin and Smith (2001) (see also Chirwa and Odhiambo, 2016), the ARDL representation of the general empirical model for this study is given by:

$$\begin{aligned}\Delta GROWTH = \alpha_0 &+ \sum_{i=1}^{n} \beta_{1i} \Delta gGROWTH_{t-i} + \sum_{i=0}^{n} \beta_{2i}\, \Delta OPEN_{t-i} + \sum_{i=0}^{n} \beta_{3i}\, \Delta INV/GDP_{t-i} \\ &+ \sum_{i=0}^{n} \beta_{4i}\, \Delta GOV/GDP_{t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta INF_{t-i} + \sum_{i=o}^{n} \beta_{6i} \Delta M2/GDP_{t-i} + \lambda_1 GROWTH_{t-1} \\ &+ \lambda_2 OPEN_{t-1} + \lambda_3 INV/GDP_{t-1} + \lambda_4 GOV/GDP_{t-1} + \lambda_5 INF_{t-1} + \lambda_6 M2/GDP_{t-1} \\ &+ u_t \qquad \ldots\ldots\ldots\

which is tested against the alternative hypothesis:

$H_0: \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = \lambda_6 = 0$

The outcome of the cointegration test is determined by the computed F-statistic, which is compared with the critical values tabulated in Pesaran and Pesaran (2009). This F-statistic has a non-standard distribution, irrespective of whether the regressors are integrated of order zero $I(0)$; or integrated of order one, $I(1)$ (Pesaran and Pesaran 2009, p308). There are two sets of critical value bounds for the F-test: the first one assumes that all the variables in the ARDL model are $I(0)$, while the other set assumes that all the variables are $I(1)$. The decision to reject the null hypothesis of no cointegration is made on the basis of whether the computed F-statistic falls outside or within the critical value bounds.

If the computed F-statistic falls outside the critical value bounds, a conclusive decision can be made regarding cointegration without the need to establish whether the variables are $I(0)$, or $I(1$or fractionally integrated. For example, if the results show that the computed F-statistic is higher than the upper critical value bound, the null hypothesis of no cointegration is rejected. And if the computed F-statistic is less than the lower bound, the null hypothesis of no cointegration cannot be rejected. But if the computed F-statistic falls within the upper and lower bounds, no conclusive inference can be made. Once a long-run relationship has been established, the second stage of the ARDL procedure can be carried out.

The second stage of the ARDL modelling involves the estimation of the coefficients of the long-run relationships as well as drawing inference on the values of the estimated coefficients. In this stage, the optimal lag length for the ARDL model is selected with the use of suitable lag selection criteria, such as the Akaike Information Criterion (AIC) or the Schwartz-Bayesian Criterion (SBC).

The error correction model

The specification of the error correction mechanism (ECM) of the ARDL model for the current study is given by:

$$\Delta GROWTH_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i}\, \Delta GROWTH_{t-i} + \sum_{i=0}^{n} \alpha_{2i} \Delta OPEN_{t-i} + \sum_{i=0}^{n} \alpha_{3i} \Delta INV/GDP_{t-i} + \sum_{i=0}^{n} \alpha_{4i} \Delta GOV/GDP_{t-i} + \sum_{i=0}^{n} \alpha_{5i} \Delta INF_{t-i} + \sum_{i=0}^{n} \alpha_{6i} \Delta M2/GDP_{t-i} + \varphi ECT_{t-1} + \mu_t \quad \ldots\ldots\ldots\

Data for the variables used in this study is from the World Bank World Development Indicators (2015). This data is annual time series data covering the period 1980-2014.

Below is a descriptive summary of the variables used in the current study:

GROWTH	Annual growth rate of real GDP per capita – a proxy for economic growth
OPEN1	Ratio of total trade to GDP – a proxy for trade openness
OPEN2	Ratio of exports to GDP – a proxy for trade openness
OPEN3	Ratio of imports to GDP – a proxy for trade openness
OPEN4	Trade openness index – a proxy for trade openness
INV/GDP	Ratio of investment to GDP – a proxy for investment
GOV/GDP	Ratio of government consumption to GDP – a proxy for government size
INFL	Annual growth rate in consumer price index – a proxy for inflation rate
M2/GDP	Ratio of liquid liabilities to GDP – a proxy for financial development

6.6 Conclusion

This chapter provided a discussion on empirical model specification and estimation techniques. The analysis of the different measures of trade openness indicates that there are different ways of defining and measuring trade openness. Generally, several previous studies use trade-based proxies or tariff-based measures, as well as indices that could be derived from different indicators of economic and political stability. Following previous studies, this study uses four different proxies of trade openness, three of which are derived from trade ratios. The fourth indicator is a computed index of trade openness, which is derived from an OLS regression of trade openness. The empirical model for this study is adapted from Jin (2000), while the trade-based proxies are based on Yanikkaya (2003). The study employs the ARDL approach to cointegration, which is deemed appropriate given the relatively small sample size of this study. This chapter also provides a detailed definition and a summary of selected variables, which are real GDP per capita growth (GROWTH); proxies for trade openness (OPEN1, OPEN2, OPEN3, OPEN4); investment (INV/GDP); final government consumption expenditure (GOV/GDP); inflation rate (INFL); and financial development (M2/GDP).

CHAPTER 7

ECONOMETRIC ANALYSIS AND EMPIRICAL FINDINGS

7.1 Introduction

In this chapter, the study provides analysis of the results based on the estimation techniques and the empirical model specified in the previous chapter. This chapter is organised into eight sections. Following the introduction, Section 7.2 provides a discussion on stationarity tests. In Section 7.3, the discussion focuses on econometric analysis and empirical findings on Equation 1, followed by econometrics analysis and empirical findings on Equation 2 in Section 7.4. Section 7.5 presents the econometric analysis and empirical findings on Equation 3, while Section 7.6 provides the econometrics analysis and empirical findings on Equation 4. A summary of the results for all equations is presented in Section 7.7, while Section 7.8 concludes the chapter. For Botswana and South Africa, the study uses data from 1975-2014 and 1979-2013 for Lesotho.

7.2 Stationarity tests results

The unit root tests were performed as a precursor to the cointegration analysis so as to establish the order of integration of the variables. The prerequisite for the ARDL bounds testing procedure is that the variables used in estimation should be integrated of order zero $[I(0)]$ or order one $[I(1)]$, or both, but not $I(2)$ or higher. For this purpose, three types of stationarity tests were used in the current study: the Dickey-Fuller general least square test; the Phillips-Perron test, and the Perron (1997) test. Table 7.1 presents the results of the stationarity tests.

Table 7.1 Stationarity tests of all variables

Dickey-Fuller general least squares (DF-GLS)												
	South Africa				Lesotho				Botswana			
Variable	Stationarity of all variables in levels		Stationarity of all variables in first difference		Stationarity of all variables in levels		Stationarity of all variables in first difference		Stationarity of all variables in levels		Stationarity of all variables in first difference	
	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend
GROWTH	-3.870***	-4.166***	–	–	-2.790	-6.057***	-1.085	–	-4.651***	-5.405***	–	–
OPEN1	-1.692*	-1.910	–	-6.319***	-2.195	-2.331	-5.607***	-6.392***	-1.443	-2.389	-5.228***	-5.330***
OPEN2	-2.228**	-2.247	–	-5.635***	-0.967	-1.730	-4.694***	-4.778***	-2.024	-2.444	-5.466***	-6.061***
OPEN3	-1.518	-1.961	-6.367***	-6.899***	-1.985	-2.745	-5.628***	-6.463 ***	-1.253	-1.831	-5.385***	-4.733***
OPEN4	-2.298**	-2.642	–	-6.267***	-1.192	-1.415	-5.032***	-6.381***	-2.428	-2.493	-4.771***	-5.776***
INV/GDP	-1.470	-1.964	-3.803***	-4.161***	-1.184	-1.444	-4.984***	-5.394***	-2.293	-2.401	-4.318***	-4.646***
GOV/GDP	-0.758	-1.923	-4.686***	-5.548***	-0.745	-1.965	-0.701	-4.727***	-1.269	-1.652	-4.515***	-5.296***
INFL	-1.445	-2.730	-5.650***	-5.154***	-3.607***	-4.587***	–	–	-2.473**	-3.926***	–	–
M2/GDP	-1.137	-1.668	-3.802***	-4.218***	-1.365	-2.102	-1.298	-2.081	-1.212	-2.369	-1.667*	-5.055***

Phillips-Perron (PP)

	South Africa				Lesotho				Botswana			
Variable	**Stationarity of all variables in levels**		**Stationarity of all variables in first difference**		**Stationarity of all variables in levels**		**Stationarity of all variables in First difference**		**Stationarity of all variables in levels**		**Stationarity of all variables in first difference**	
	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend
GROWTH	-3.873***	-3.997***	–	–	-4.768***	-5.920***	–	–	-4.596***	-5.391***	–	–
OPEN1	-1.532	-1.750	-6.469***	-12.058***	-2.337	-2.147	-6.625***	-7.134***	-1.415	-2.645	-6.259***	-6.167***
OPEN2	-2.342	-2.304	-5.842***	-5.914***	-1.126	-1.877	-4.606***	-4.516***	-2.510	-2.979	-6.378***	-6.306***
OPEN3	-1.475	-2.108	-6.717***	-14.507***	-1.934	-2.568	-6.750***	-7.586***	-1.619	-1.925	-4.676***	-4.591***
OPEN4	-2.659*	-2.506	–	-12.727***	-1.027	-0.522	-5.938***	-6.994***	-2.492	-2.639	-6.699***	-8.133***
INV/GDP	-2.058	-1.096	-3.712***	-4.258***	-1.335	-1.672	-5.277***	-5.236 ***	-2.614*	-2.613	–	-4.629***
GOV/GDP	-1.859	-2.190	-5.903***	-5.809***	-1.701	-2.229	-6.248***	-6.536***	-4.596***	-5.391***	–	–
INFL	-1.486	-2.576	-8.423***	-8.887***	-3.756***	-4.274***	–	–	-1.415	-2.645	-6.259***	-6.167***
M2/GDP	-0.877	-1.899	-4.123***	-4.141***	-2.589	-3.553**	-4.577***	–	-2.510	-2.979	-6.378***	-6.306***

Perron (1997)

Variable	South Africa				Lesotho				Botswana			
	Stationarity of all variables in levels		Stationarity of all variables in first difference		Stationarity of all variables in levels		Stationarity of all variables in first difference		Stationarity of all variables in levels		Stationarity of all variables in first difference	
	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend	without trend	with trend
GROWTH	-4.664***	-4.059***	–	–	-7.506***	-7.876***	–	–	-6.573***	-6.426***	–	–
OPEN1	-2.687	-2.927	-6.476***	-6.321***	-2.691	-3.086	-7.576***	-7.452***	-4.553**	-4.350	–	-6.438***
OPEN2	-2.496	-3.391	-5.763***	-5.482***	-3.926	-3.833	-6.188***	-6.489***	-3.580	-3.330	-7.307***	-7.353***
OPEN3	-3.142	-2.951	-6.872***	-7.157***	-3.339	-3.289	-7.851***	-7.712***	-1.985	-3.692	-6.128***	-6.035***
OPEN4	-3.327	-3.909	-6.175***	-6.151***	-3.007	-2.984	-7.421***	-7.891***	-3.603	-3.973	-6.824***	-6.732***
INV/GDP	-3.023	-3.586	-5.290***	-5.290***	-2.772	-6.167***	-6.218***	–	-5.177***	-6.634***	–	–
GOV/GDP	-2.415	-2.835	-6.399***	-6.295***	-5.104***	-6.270***	–	–	-3.231	-3.281	-6.622***	-6.688***
INFL	-4.765**	-4.719*	–	–	-5.911***	-6.980***	–	–	-3.851	4.539	-9.129***	-8.632***
M2/GDP	-3.875	-3.782	-4.824**	-5.467***	-5.585**	-5.607***	–	–	-6.573***	-6.426***	–	–

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively

The three stationarity test results reported in Table 7.1 show that depending on the type of the test, and on whether the trend is included or not, the variables are either stationary in levels or are stationary after first differencing. Given the stationarity test results, in which the variables were found to be integrated of order zero [I(0)] or order one [I(1)], it implies that the ARDL bounds testing procedure can be carried out.

7.3 Econometric analysis and empirical findings of Equation 1 (all countries)

After establishing the order of integration of the variables, cointegration test was conducted to determine whether a long-run relationship exists among the variables. Table 7.2 presents the results for ARDL bounds test for Equation 1 for South Africa, Lesotho and Botswana.

Table 7.2 Results of the bounds F-test for cointegration

Country	Dependent variable	Function	F-statistic	Cointegration status
South Africa	GROWTH	F(GROWTH| OPEN1, INV/GDP, GOV/GDP, INFL, M2/GDP)	4.543 ***	cointegrated
Lesotho	GROWTH	F(GROWTH| OPEN1, INV/GDP, GOV/GDP, INFL, M2/GDP)	18.239***	cointegrated
Botswana	GROWTH	F(GROWTH| OPEN1, INV/GDP, GOV/GDP, INFL, M2/GDP)	3.366*	cointegrated

Asymptotic critical values						
Pesaran *et al* (2001), p300, Table CI(iii) Case III	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	3.41	4.68	2.62	3.79	2.26	3.35

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively

The results reported in Table 7.2 show that for all the study countries, the calculated F-statistics lie above the critical value bounds reported by Pesaran *et al* (2001), Table CI(iii) Case III. Based on these results, the conclusion is that a long-run level relationship exists among the variables used in Equation 1 in the three countries studied. Having confirmed the existence of a long-run relationship among the variables, the estimation of the long-run and short-run coefficients of Equation 1 was carried out. The optimal lag length for Equation 1 was selected using the Akaike Information Criterion (AIC). The AIC-selected optimal lag length for Equation 1 is ARDL(2, 0, 1, 2, 2, 0) for South Africa; ARDL(1, 0, 1, 1, 1, 1) for Lesotho; and ARDL(1,2,1,2,1,0) for Botswana.

After the estimation of the long-run relationship, the lagged residual was included in the ARDL and the error-correction model was estimated. Table 7.3 presents the long- and short-run results for Equation 1.

Table 7.3 Results of the long-run and short-run estimations

Panel 1: Long-run coefficients, dependent variable is GROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
OPEN1	0.188* (2.037)	0.052	0.007 (0.289)	0.775	0.170*** (2.891)	0.008
INV/GDP	-0.449** (-2.084)	0.047	-0.019 (-0.673)	0.507	0.100 (0.541)	0.593
GOV/GDP	-0.941** (-2.240)	0.033	0.219** 2.559)	0.017	-0.155 (-0.529)	0.601
INFL	0.033 (0.262)	0.795	0.104 (1.097)	0.284	-0.096 (-0.213)	0.833
M2/GDP	0.032 (0.498)	0.622	0.134* (1.912)	0.068	-0.082 (-0.658)	0.516
C	14.615 (1.666)	0.107	-10.915 (-1.562)	0.131	-8.459 (-0.466)	0.645
Panel 2: Short-run coefficients, dependent variable is ΔGROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
ΔGROWTH(1)	-0.090 (-0.629)	0.534	…	…	…	…
ΔOPEN1	0.182** (2.626)	0.013	0.006 (0.290)	0. 774	0.407*** (4.177)	0.000
ΔOPEN1(1)	…	…	…	…	-0.052 (-0.433)	0.668
ΔINV/GDP	-0.121 (-0.431)	0.669	-0.014 (-0.246)	0. 808	0.313 (1.183)	0.246
ΔGOV/GDP	-0.961** (-2.397)	0.023	-0.148 (-1.404)	0. 171	-1.275*** (-3.192)	0.003
ΔGOV/GDP (1)	-0.710* (-1.809)	0.080	…	…	0.578 (1.137)	0.265
ΔINFL	-0.171 (-1.293)	0.206	-0.002 (-0.040)	0. 968	0.507* (1.826)	0.078
ΔINFL(1)	-0.427*** (-2.73)	0.010	…	…	….	…
ΔM2/GDP	0.031 (0.486)	0.631	-0.063 (-0.514)	0. 611	-0.081 (-0.659)	0.515
ΔM2/GDP (1)	…	…	…	…	…	…
ECM(-1)	-0.969*** (-4.372)	0.000	-0.890*** (-7.409)	0.000	-0.985*** (-4.832)	0.000

Test statistic	South Africa	Lesotho	Botswana
R-squared	0.789	0.834	0.752
R-bar squared	0.695	0.764	0.638
SE of regression	1.439	1.973	3.045
F-statistic	11.226[0.000]	20.059[0.000]	9.879[0.000]
RSS	93.124	93.456	241.035
DW	2.109	2.723	1.983
AIC	-76.442	-77.850	-103.856
SBC	-87.419	-86.405	-114.669

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively. T-ratios are in parentheses ().

The long-run regression results of Equation 1, presented in Table 7.3, indicate that the coefficient of trade openness is significant only in South Africa and Botswana, but insignificant in the case of Lesotho. For South Africa and Botswana, the long-run results indicate that in the long run, trade openness, based on the ratio of exports and imports to GDP, has a positive impact on economic growth in South Africa and Botswana. This finding is consistent with Brückner and Lederman (2012). On the contrary, the results for Lesotho show that trade openness has no significant impact on economic growth in the country, which is not surprising given that Lesotho is a least developed country. This finding is consistent with Young (1991). According to Young (1991), least developed countries (LDCs) tend to experience dynamic losses from trade with respect to technical progress and economic growth. Hence, trade openness may not necessarily always have significant positive effects on economic growth.

The long-run results for other variables in the three study countries are mixed. The coefficient of investment (INV/GDP) is negative and statistically significant in the case of South Africa, which is contrary to the expectations of the current study. Although the negative sign on the long-run coefficient of investment contradicts the expectations of the current study, it is consistent with the findings of Nyasha and Odhiambo (2015), and Chang and Mendy (2012). Based on these results, it can be concluded that increases in gross investment in physical capital have not effectively stimulated economic growth in South Africa during the period reviewed in this study. This could be due to several reasons. Among other things, even though gross investment has been increasing in South Africa, generally, there have been sharp decreases in the pace of the growth rate in real fixed capital formation by the private sector in recent years (see South African Reserve Bank, 2014). In the case of government consumption expenditure variable (GOV/GDP), the long-

run results show a negative and statistically significant coefficient only in the case of South Africa. This result contradicts the expectations of the current study. This implies that government consumption expenditure has a negative impact on economic growth in South Africa, which can be linked to inefficiencies in public expenditure. The negative impact of government consumption expenditure on the economy is consistent with Landau (1983). For Lesotho and Botswana, the coefficient of government consumption expenditure is insignificant.

In all three countries, the long-run coefficient of inflation rate (INFL) is insignificant. Regarding financial development (M2/GDP), apart from Lesotho, there is no evidence that financial development has a statistically significant impact on economic growth in the long run. For Lesotho, the coefficient of M2/GDP is positive and statistically significant. This finding implies that that financial development has a positive impact on economic growth in Lesotho, which in turn suggests that improvements in financial development in the country have been beneficial. fail to facilitate portfolio investment, ending up in the wastage of resources instead of improvements in economic growth (see Allen and Ndikumana, 2000). This could be one of the possible explanations why financial development is negatively related to economic growth in Lesotho.

The short-run results reported in Table 7.3 show that the coefficient of trade openness is positive and statistically significant in South Africa and Botswana as expected. This indicates that an increase in trade openness leads to an increase in economic growth in South Africa and Botswana in the short run. For Lesotho, the coefficient of trade openness is insignificant.

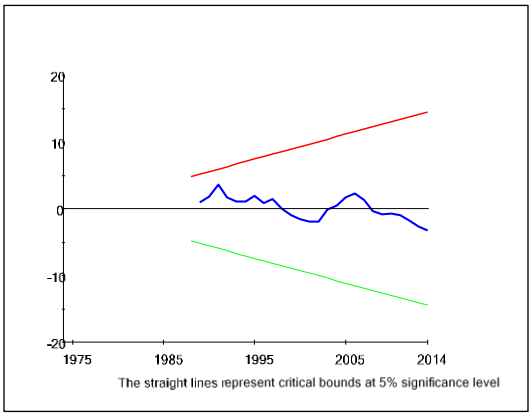
Other short-run results show that the coefficient of investment is insignificant in all the study countries. The short-run results also show that the coefficient of government consumption expenditure is negative and statistically significant in South Africa and Botswana, but is insignificant in Lesotho. This implies that government consumption expenditure has a negative impact on economic growth in South Africa and Botswana in the short run. Also, the short-run results show that the coefficient of inflation is positive and statistically significant in Botswana, but is insignificant in South Africa and Lesotho. The results for Botswana regarding the impact of inflation on economic growth indicate that in the short run, inflation supports economic growth in Botswana, consistent with the Mundell-Tobin effect. The Mundell-Tobin effect demonstrates how an increase in inflation rate could lead to an increase in economic growth, and normally this effect is more practical in low-inflation countries (see Bullard and Keating, 1995). The short-run results also show that the coefficient of financial development is negative and statistically significant in Lesotho, but is insignificant in South Africa and Botswana.

The results reported in Table 7.3 further show that the error correction terms for all three countries are negative and statistically significant, indicating that there is convergence towards long-run equilibrium. The ECM results show that economic growth rate responds to deviations in the long-run equilibrium by 97%, 89% and 99% in South Africa, Lesotho and Botswana respectively. The adjusted R-squared values for the three countries show that about 70%, 76%, and 64% of the variations in the regressors are explained by the dependent variables in South Africa, Lesotho and Botswana respectively.

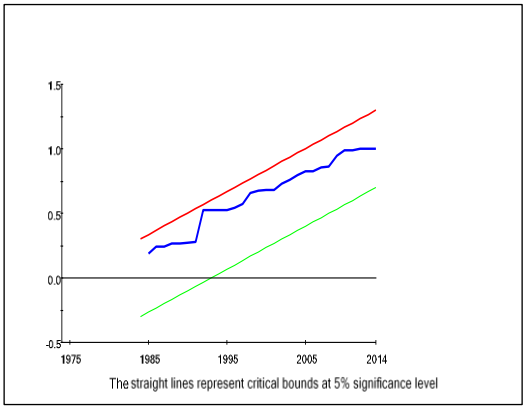
Figure 7.1 Plot of Cusum and CusumQ of equation 1

South Africa

Plot of Cumulative Sum of Recursive Residuals

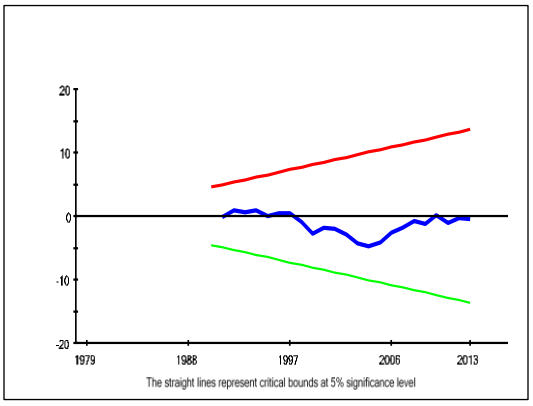


Plot of Cumulative Sum of Squares of Recursive Residuals

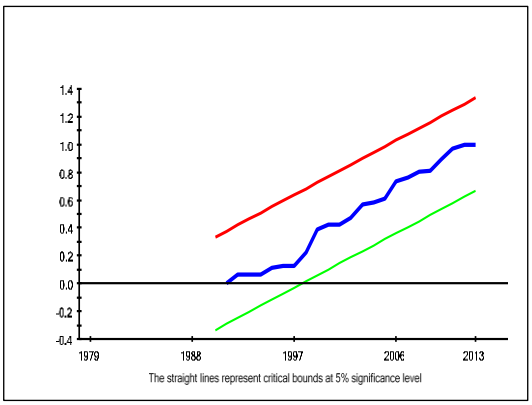


Lesotho

Plot of Cumulative Sum of Recursive Residuals

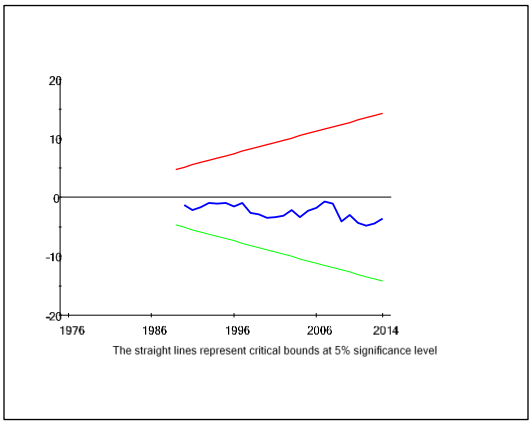


Plot of Cumulative Sum of Squares of Recursive Residuals



Botswana

Plot of Cumulative Sum of Recursive Residuals



Plot of Cumulative Sum of Squares of Recursive Residuals

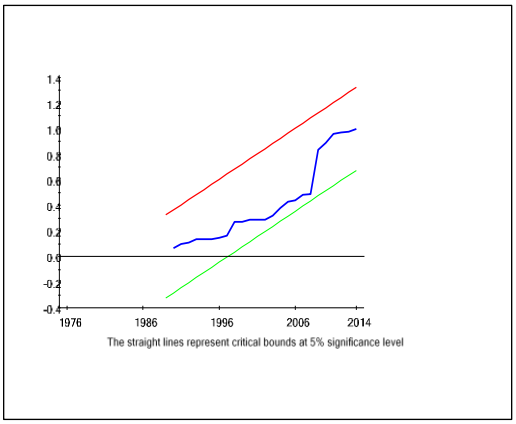


Figure 7.1 shows a plot of the cumulative sum of recursive residuals and the cumulative sum of squared residuals of Equation 1. The reported plots lie within the two lines, which is an indication that in all three countries, Equation 1 is stable. This implies that the long-run coefficients of the regressors are stable.

7.4 Econometric analysis and empirical findings of Equation 2

The results for Equation 2, in which the impact of trade openness on economic growth is tested using the ratio of exports to GDP, (OPEN2), are discussed in this section. In Equation 2, the economic growth equation is expressed by running a regression of real GDP per capita growth on trade openness and other control variables as specified in Equation 1. The econometric analysis for Equation 2 starts with a cointegration test, which was performed to establish whether a long-run relationship exists between the variables. Table 7.4 presents the results of the bounds test for Equation 2.

Table 7.4 Results of the bounds F-test for cointegration for Equation 2

Country	Dependent variable	Function	F-statistic	Conclusion
South Africa	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	5.419***	cointegrated
Lesotho	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	13.328***	cointegrated
Botswana	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	5.111**	cointegrated

Asymptotic critical values						
Pesaran *et al* (2001), p300, Table CI(iii) Case III	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	3.41	4.68	2.62	3.79	2.26	3.35

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively

The results reported in Table 7.4 indicate that in all three study countries, there is a cointegrating relationship between the variables used in Equation 2. This is confirmed by the values of the computed F-statistics, which are above the upper critical value bounds. For South Africa and Lesotho, the corresponding F-statistics are above the upper critical value bounds at 1% level of statistical significance. For Botswana, the computed F-statistic lies above the upper critical value bounds at 5% level of statistical significance.

Having confirmed that there is cointegration between the variables for Equation 2, the optimal lag length was determined using the Akaike Information Criterion (AIC). The AIC-selected optimal lag length for Equation 2 is ARDL(2, 0, 1, 2, 2, 2) for South Africa; ARDL(1, 0, 1, 1, 1, 1) for Lesotho; and ARDL(1, 1, 0, 1, 0, 0) for Botswana. Following to the estimation of the long-run relationship, the lagged residual was included in the ARDL and the error-correction model was estimated. The results of the long- and short-run estimations of Equation 2 are reported in Table 7.5.

Table 7.5 Results of the long-run and short-run estimations of Equation 2

Panel 1: Long-run coefficients, dependent variable is GROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
OPEN2	0.241 (1.697)	0.101	0.034 (0.550)	0.587	0.439*** (4.777)	0.000
INV/GDP	-0.344 (-1.692)	0.102	-0.003 (-0.083)	0.935	0.367** (3.160)	0.005
GOV/GDP	-0.844* (-1.960)	0.060	0.182 (1.679)	0.106	0.020 (0.079)	0.937
INFL	0.066 (-0.548)	0.588	0.0494 (0.972)	0.341	0.389 (1.612)	0.117
M2/GDP	0.055 (0.886)	0.383	0.147* (1.961)	0.062	0.096 (0.945)	0.352
C	13.640 (1.482)	0.150	-10.807* (-1.844)	0.078	-37.418** (-2.234)	0.022
Panel 2: Short-run coefficients, dependent variable is ΔGROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
ΔGROWTH(1)	-0.110 (-0.712)	0.482	…	…	…	…
ΔOPEN2	0.236** (2.088)	0.045	0.030 (0.552)	0.589	0.618*** (5.040)	0.000
ΔINV/GDP	0.123 (0.425)	0.674	-0.001 (-0.02)	0.999	0.346** (2.514)	0.017
ΔGOV/GDP	-0.831* (-1.878)	0.070	-0.154 (-1.467)	0.153	-0.548* (-1.860)	0.072
ΔGOV/GDP (1)	-0.802* (-1.979)	0.057	…	…	...	…
ΔINFL	-0.182 (-1.272)	0.213	-0.009 (0.163)	0.872	0.366* (1.718)	0.095
ΔINFL(1)	-0.369** (-2.340)	0.026	…	…	…	…
ΔM2/GDP	0.054 (0.851)	0.401	-0.058 (-0.478)	0.636	0.090 (1.056)	0.299
ECM(-1)	-0.982*** (-4.231)	0.000	-0.894*** (-7.537)	0.000	-0.941*** (-4.045)	0.000
Test statistic	**South Africa**		**Lesotho**		**Botswana**	
R-squared	0.772		0.835		0.670	
R-bar squared	0.670		0.767		0.582	
SE of regression	1.496		1.964		2.555	
F-statistic	11.226[0.000]		20.279 [0.000]		10.150[0.000]	
RSS	60.390		92.61		195.867	
DW	2.234		2.758		1.571	
AIC	-77.997		-77.691		-95.809	
SBC	-88.974		-86.2452		-103.295	

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively. T-ratios are in parentheses ().

Overall, the results presented in Table 7.5 lead to mixed conclusions regarding the impact of trade openness on economic growth across the three countries. The long-run results show that the

coefficient of trade openness is insignificant in South Africa and Lesotho. For Botswana, the results indicate a positive and statistically significant coefficient of trade openness. This implies that trade openness, based on the ratio of exports to GDP, has a positive impact on economic growth in Botswana. Based on the results for Botswana, the positive role of the trade openness on economic growth, emanating from the exports, is confirmed. This is consistent with the findings of Ukpolo (1994). For Botswana, the positive impact of trade openness on economic growth could be linked to the export-led growth initiatives that have been implemented in the country over the past two decades (see Malefane and Odhiambo, 2016).

The long-run results for other variables apart from trade openness show that the coefficient of investment is insignificant in South Africa and Lesotho. For Botswana, the results show a positive and statistically significant coefficient of the investment variable as expected by the study. This finding suggests that the increased capital accumulation supports economic growth in Botswana, consistent with the postulates of Kaldor (1961). The long-run results show further that for South Africa, the coefficient of government expenditure variable is negative and statistically significant, while it is insignificant in Lesotho and Botswana. For South Africa, these findings point to possible inefficiencies resulting from government consumption expenditure in the country. The results for South Africa are consistent with Chipaumire *et al* (2014). However, in the cases of Lesotho and Botswana, the coefficient of government expenditure is insignificant. The long-run results also show that for inflation rate, the coefficient (INFL) is statistically insignificant in all three countries. The long-run results further show that the coefficient of financial development variable (M2/GDP), is insignificant in South Africa and Botswana. For Lesotho, the coefficient of financial development variable, (M2/GDP), positive and statistically significant as expected.

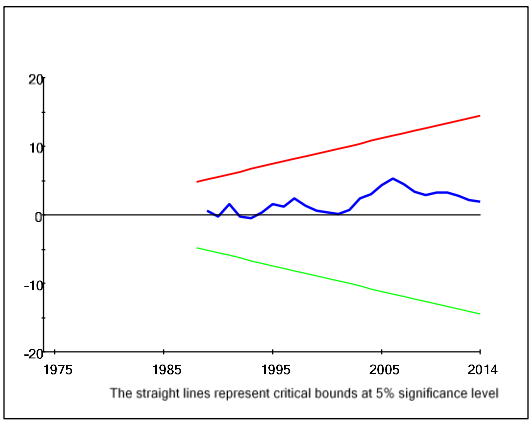
The short-run results show that the coefficient of trade openness is positive and statistically significant in South Africa and Botswana, but is insignificant in Lesotho. These results imply that in the short run, an increase in trade openness leads to an increase in economic growth in South Africa and Botswana, but not in Lesotho. Other short-run results show that for South Africa and Lesotho, the coefficient of investment is insignificant, whereas it is positive and statistically significant for Botswana, as expected. The short-run results further show that the coefficient of inflation rate is negative and statistically significant in South Africa, but is insignificant in Lesotho and Botswana. Regarding financial development, the results show an insignificant coefficient for South Africa and Botswana, and a negative and statistically significant coefficient for Lesotho.

The results reported in Table 7.5 also show that the coefficients of the error correction terms for the three countries are negative and statistically significant, as expected. The ECM results show that economic growth rate responds to deviations in the long-run equilibrium by 99%, 89% and 94% in South Africa, Lesotho and Botswana respectively. The adjusted R-squared values for the three countries are 67%, 77% and 58% for South Africa, Lesotho and Botswana respectively. These adjusted R-squared values indicate that the estimated equations for the three countries fit well. The next step in the discussion provides an analysis of the plots derived from the residuals of Equation 2. The Cusum and CusumQ plots reported in Figure 7.2 show that Equation 2 is stable in all three study countries.

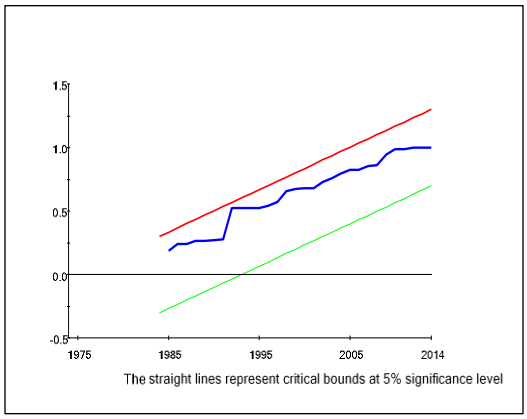
Figure 7.2 Plot of Cusum and CusumQ of Equation 2

South Africa

Plot of Cumulative Sum of Recursive Residuals

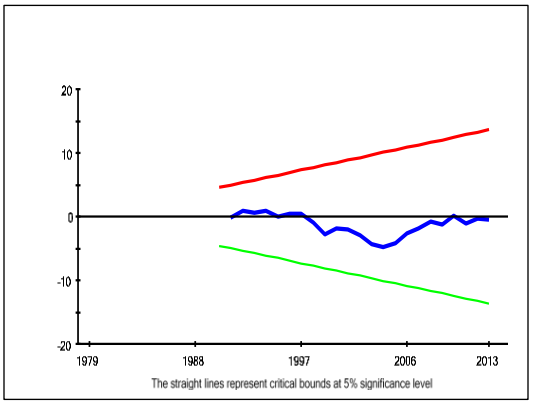


Plot of Cumulative Sum of Squares of Recursive Residuals

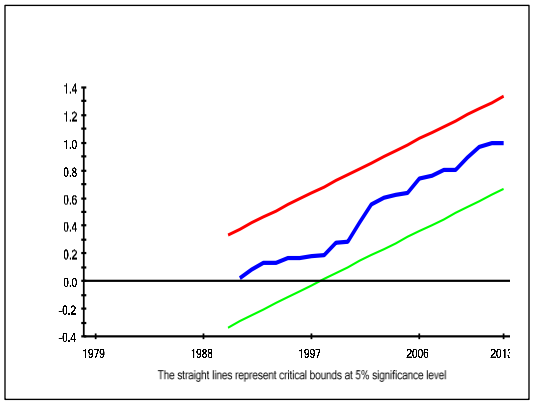


Lesotho

Plot of Cumulative Sum of Recursive Residuals

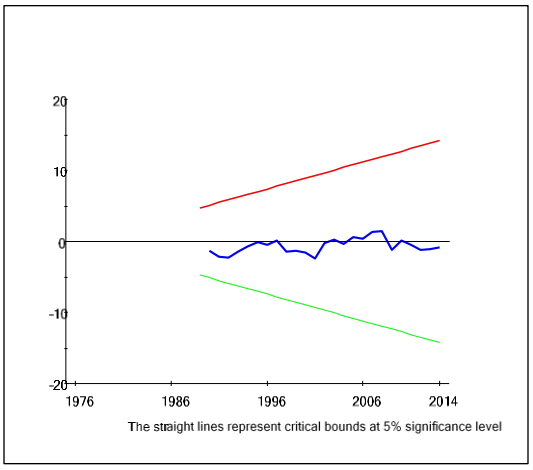


Plot of Cumulative Sum of Squares of Recursive Residuals



Botswana

Plot of Cumulative Sum of Recursive Residuals



Plot of Cumulative Sum of Squares of Recursive Residuals

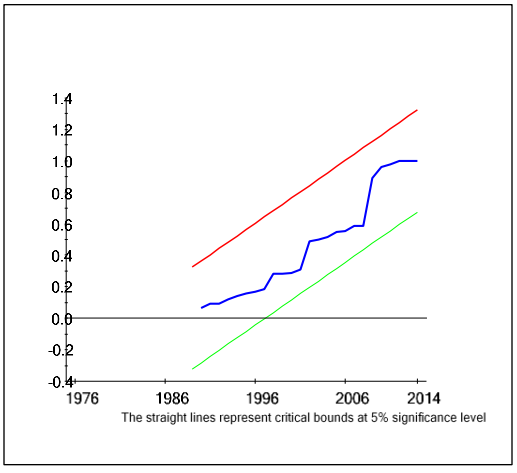


Figure 7.2 shows that the residual plots for all three countries are satisfactory. Since the plots for the cumulative sum of recursive residual and the cumulative sum of squared residuals lie between the two lines, it shows that in all three countries, the parameters estimated in Equation 2 are stable.

7.5 Econometric analysis and empirical findings of Equation 3

The results for Equation 3, in which the impact of trade openness on economic growth is tested using the ratio of exports to GDP, (OPEN2), are discussed in this section. In Equation 3, the economic growth equation is expressed by running a regression of real GDP per capita growth on trade openness and other control variables as specified in Equation 1 and Equation 2. The econometric analysis for Equation 3 starts with cointegration test, which was used to determine whether a long-run relationship exists between the variables. Table 7.8 presents the cointegration test results for Equation 3.

Table 7.6 Results of the bounds test for cointegration for Equation 3

Country	Dependent variable	Function	F-statistic	Conclusion
South Africa	GROWTH	F(GROWTH| OPEN3, INV/GDP, GOV/GDP, INFL, M2/GDP)	5.534***	cointegrated
Lesotho	GROWTH	F(GROWTH| OPEN3, INV/GDP, GOV/GDP, INFL, M2/GDP)	17.862***	cointegrated
Botswana	GROWTH	F(GROWTH| OPEN3, INV/GDP, GOV/GDP, INFL, M2/GDP)	5.022**	cointegrated

Asymptotic critical values						
Pesaran *et al* (2001), p300, Table CI(iii) Case III	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	3.41	4.68	2.62	3.79	2.26	3.35

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively

The cointegration test results reported in Table 7.6 indicate that there is a cointegrating relationship between the variables used in Equation 3 in all three study countries. This finding is confirmed by the values of the computed F-statistics, which are above the upper critical value bounds at 5% level of statistical significance.

Having confirmed that there is cointegration between the variables for Equation 3, the optimal lag length required in the estimation of the long- and short-run coefficients was determined using the Akaike Information Criterion (AIC). The AIC selected ARDL(1, 1, 0, 0, 0, 0) for South Africa; ARDL(1, 0, 1, 1, 1, 1) for Lesotho; and ARDL(1, 0, 2, 1, 3, 1) for Botswana. After the estimation of the long-run relationship, the lagged residual was included in the ARDL and the error-correction model for Equation 3 was estimated. Table 7.7 presents the results for the long- and short-run estimations of Equation 3.

Table 7.7 Results of the long-run and short-run estimations of Equation 3

Panel 1: Long-run coefficients, dependent variable is GROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
OPEN3	-0.006 (-0.040)	0.969	0.003 (0.096)	0.925	0.078 (0.856)	0.400
INV/GDP	-0.246* (-1.717)	0.096	-0.020 (-0.774)	0.447	-0.332 (-1.048)	0.305
GOV/GDP	-0.882*** (-2.907)	0.007	0.223** (2.498)	0.020	-0.682** (-2.216)	0.036
INFL	-0.174* (-1.834)	0.076	0.106 (1.114)	0. 276	-0.237 (-0.466)	0.645
M2/GDP	0.074 (1.209)	0.236	0.132* (1.881)	0.072	-0.309** (-2.617)	0.015
C	18.840*** (2.778)	0.009	-10.126 (-1.425)	0.167	38.485*** (2.989)	0.006
Panel 2: Short-run coefficients, dependent variable is ΔGROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
ΔOPEN3	0.419*** (3.660)	0.001	0.003 (0.096)	0. 924	0.072 (0.851)	0.402
ΔINV/GDP	-0.233 (-1.641)	0.110	-0.019 (-0.340)	0. 736	0.135 (0.369)	0.715
ΔINV/GDP(1)	…	…	…	…	0.455 (1.520)	0.140
ΔGOV/GDP	-0.834*** (-2.818)	0.008	-0.149 (-1.400)	0. 172	-0.630** (-2.007)	0.054
ΔINFL	-0.159* (-1.951)	0.060	0.001 (0.003)	0.998	0.013 (0.047)	0.962
ΔINFL(1)	…	…	…	…	-0.341 (-0.800)	0.431
ΔINFL(2)	…	…	…		0.507 (1.441)	0.161
ΔM2/GDP	0.070 (1.233)	0.226	-0.066 (-0.540)	0. 594	-0.404** (-2.468)	0.020
ECM(-1)	-0.946*** (-7.387)	0.000	-0.892*** (-7.377)	0.000	-0.924*** (-4.811)	0.000
Test statistic	**South Africa**		**Lesotho**		**Botswana**	
R-squared	0.760		0. 833		0.675	
R-bar squared	0.708		0.764		0.519	
SE of regression	1.409		1.976		3.551	
F-stat	16.9029[0.000]		19.984[0.000]		5.766[0.000]	
RSS	63.548		93.748		315.212	
DW	1.742		2.732		2.034	
AIC	-74.016		-77.905		-107.117	
SBC	-80.771		-86.459		-117.762	

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively. T-ratios are in parentheses ().

The long-run results for Equation 3 show that the coefficient of trade openness is insignificant for South Africa, Lesotho and Botswana. This implies that trade openness, based on the ratio of imports to GDP, has no significant impact on economic growth in the three study countries. Other

long-run results displayed in Table 7.7 show that that the coefficient of investment is negative and statistically significant in South Africa, but it is insignificant in Lesotho and Botswana. Although the negative coefficient of the investment variable in South Africa contradicts the expectations of this study, these results are consistent with the findings of Nyasha and Odhiambo (2015), and Chang and Mendy (2012), who found a negative relationship between investment and economic growth in South Africa and in sub-Saharan Africa respectively. These results could be due to declines in manufacturing sector outlay in South Africa, which have resulted in deterioration in the pace of growth in real fixed capital formation by private firms in the country in recent years (South African Reserve Bank, 2014).

The long-run results further show that the coefficient of government expenditure is negative and significant in all three countries, which contradicts the expectations of this study. These results suggest that there have been some inefficiencies in public expenditure in South Africa, Lesotho and Botswana. The long-run results also reveal that the coefficient of inflation rate variable is negative and statistically significant in South Africa. This indicates that inflation rate has a negative impact on long-run economic growth in South Africa, but is insignificant in Lesotho and Botswana. The finding for South Africa is consistent with Hodge (2006), who concluded that inflation hinders economic growth in South Africa. The long-run results also show that the coefficient of financial development variable, M2/GDP, is positive and statistically significant in Lesotho, but is insignificant in South Africa. For Botswana, the coefficient of financial development is negative and statistically significant, indicating that financial development has a negative impact on economic growth in the country. Although this finding contradicts the expectations of this study, it is consistent with Ram (1999) and Bittencourt et al (2015).

The short-run results show that the coefficient of trade openness is positive and significant only in South Africa. This indicates that trade openness has a positive impact on economic growth in South Africa in the short run. On the other hand, the results for Lesotho and Botswana suggest that there is no significant impact of trade openness on economic growth in these two countries in the short run. This is confirmed by a statistically insignificant coefficient of trade openness for Lesotho and Botswana.

Other short-run results indicate that the coefficient of investment is insignificant in all three countries. The results also reveal that, as expected, the coefficient of government consumption spending is negative and statistically significant in all three countries. This shows that government consumption expenditure has a negative impact on economic growth in South Africa, Lesotho

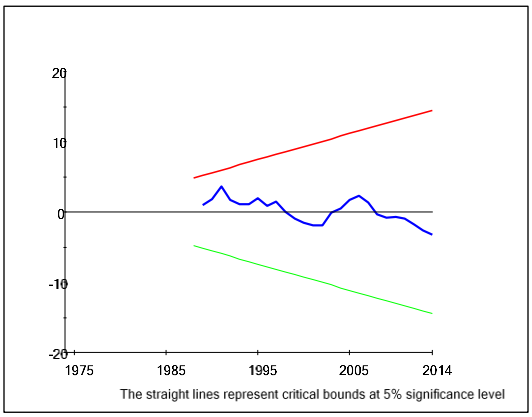
and Botswana in the short run. The short-run results also reveal that the coefficient of inflation rate is negative and statistically significant in South Africa, but is insignificant in Lesotho and Botswana. This finding suggests that inflation has a negative impact on economic growth in South Africa in the short run. The short-run results also reveal that the coefficient of financial development variable M2/GDP is insignificant in South Africa, whereas it is negative and statistically significant in Lesotho and Botswana. This result suggests that financial development has a negative impact in Lesotho and Botswana in the short run.

The results reported in Table 7.7 further show that the coefficients of the error correction terms for all three countries are negative and statistically significant, as expected. The ECM results show that economic growth rate responds to deviations in the long-run equilibrium by 95%, 89% and 92% in South Africa, Lesotho and Botswana respectively. The results further show that the respective adjusted R-squared values for South Africa, Lesotho and Botswana are 71%, 76%, and 52%. These adjusted R-squared values indicate the goodness of fit for Equation 3 for each country. As part of the empirical investigation, diagnostic tests, the residual plots for Equation 3 were examined, the results of which are displayed in Figure 7.3.

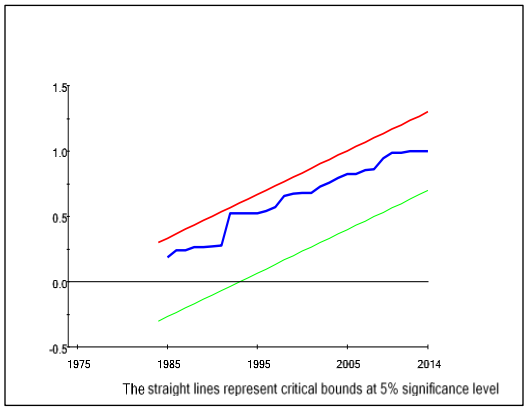
Figure 7.3 Plot of Cusum and CusumQ of Equation 3

South Africa

Plot of Cumulative Sum of Recursive Residuals

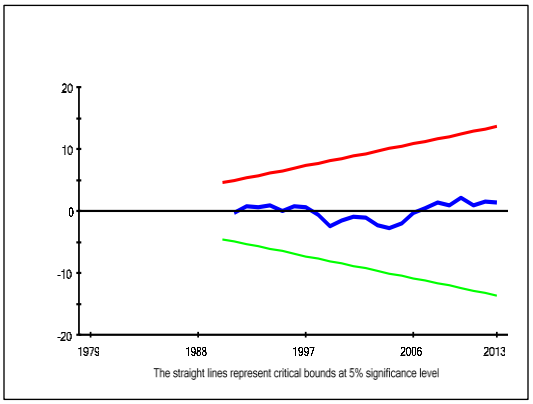


Plot of Cumulative Sum of Squares of Recursive Residuals

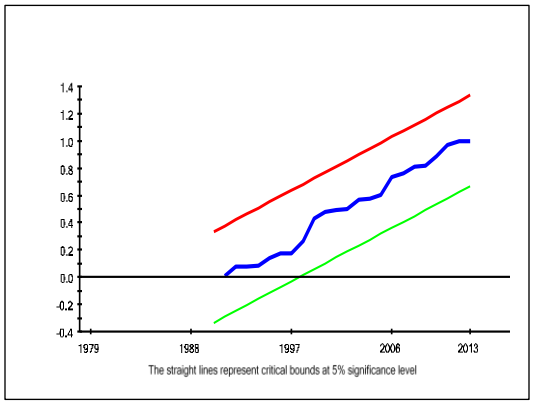


Lesotho

Plot of Cumulative Sum of Recursive Residuals

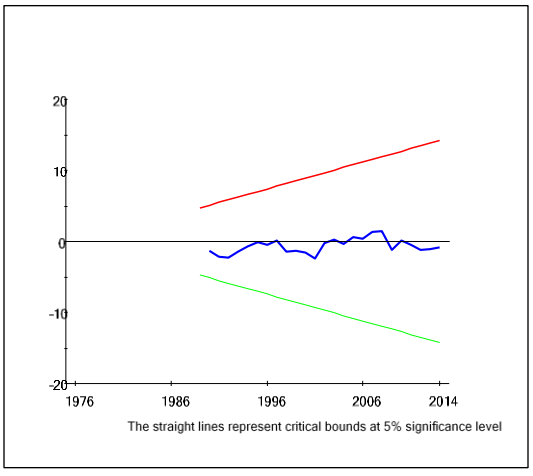


Plot of Cumulative Sum of Squares of Recursive Residuals

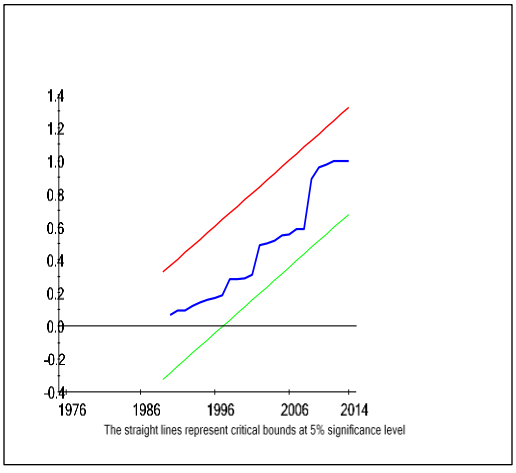


Botswana

Plot of Cumulative Sum of Recursive Residuals



Plot of Cumulative Sum of Squares of Recursive Residuals



The plots for the cumulative sum of recursive residuals and the cumulative sum of squared residuals indicate that there is stability in the parameters of Equation 3 for South Africa, Lesotho and Botswana. As displayed in Figure 3, the residual plots do not cross the boundaries.

7.6 Econometric analysis and empirical findings of Equation 4

The results for Equation 4, in which the impact of trade openness on economic growth is tested using the trade openness index (OPEN4), are discussed in this section. In Equation 4, the economic growth equation is expressed by running a regression of real GDP per capita growth on trade openness and other control variables as specified in previous equations. The econometric analysis for Equation 4 starts with the cointegration test, which tested for the existence of a long-run relationship among the variables. Table 7.8 presents the results of the bounds F-test for cointegration for Equation 4.

Table 7.8 Results of the bounds F-test for cointegration for Equation 4

Country	Dependent variable	Function	F-statistic	Conclusion
South Africa	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	3.384*	cointegrated
Lesotho	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	16.706***	cointegrated
Botswana	GROWTH	F(GROWTH| OPEN2, INV/GDP, GOV/GDP, INFL, M2/GDP)	4.133**	cointegrated

Asymptotic critical values						
Pesaran *et al* (2001), p300, Table CI(iii) Case III	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	3.41	4.68	2.62	3.79	2.26	3.35

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively

The cointegration test results reported in Table 7.8 indicate that in all three study countries, there is a cointegrating relationship among the variables for Equation 4. In all three countries, the results show the values of the computed F-statistics, which are above the upper critical value. For South Africa, the corresponding F-statistic is above the upper critical value at 10% level of statistical significance. In the case of Lesotho, the calculated F-statistic is significant at 1% level of statistical significance. For Botswana, the computed F-statistic lies above the upper critical value at 5% level of statistical significance.

Having confirmed that there is cointegration between the variables for Equation 4, the optimal lag length in each study country was determined using the Akaike Information Criterion (AIC). Based on the AIC, the selected models are ARDL(1, 0, 0, 2, 0, 0) for South Africa; ARDL(1, 1, 0, 1, 1, 1) for Lesotho; and ARDL(1, 2, 1, 2, 1, 0) for Botswana. After the estimation of the long-run relationship, the lagged residual was included in the ARDL and the error-correction model was estimated.

Table 7.9 Results of the long-run and short-run estimations of Equation 4

Panel 1: Long-run coefficients, dependent variable is GROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
OPEN4	-0.034 (-0.457)	0.651	-0.016 (-0.767)	0. 451	0.240** (2.674)	0.013
INV/GDP	-0.236 (-1.168)	0.252	-1.032 (-1.286)	0. 211	0.045 (0.223)	0.825
GOV/GDP	-0.986* (-1.994)	0.055	0.254*** (2.922)	0. 008	-0.269 (-0.917)	0.368
INFL	-0.176* (-1.719)	0.096	0.127 (1.428)	0. 167	0.116 (0.250)	0.805
M2/GDP	0.090 (1.621)	0.115	0. 139* (2.042)	0. 053	-0.177 (-1.614)	0.119
C	19.929* (1.913)	0.065	-10.399* (-1.967)	0. 061	13.744 (0.962)	0.345
Panel 2: Short-run coefficients, dependent variable is ΔGROWTH						
	South Africa		**Lesotho**		**Botswana**	
Regressor	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
ΔOPEN4	-0.033 (-0.463)	0.646	0.038 (1.678)	0.105	0.409*** (4.499)	0.000
ΔOPEN4(1)	…	…	…	…	-0.070 (-0.725)	0.474
ΔINV/GDP	-0.225 (-1.162)	0.254	-0.029 (-1.285)	0.210	0.256 (0.952)	0.349
ΔGOV/GDP	-1.155** (-2.537)	0.016	-0.117 (-1.161)	0.256	-1.340*** (-3.436)	0.002
ΔGOV/GDP (1)	-1.094** (-2.518)	0.017	…	…	0.733 (1.550)	0.133
ΔINFL	-0.168* (-1.742)	0.091	-0.008 (-0.159)	0.875	0.670** (2.459)	0.020
ΔM2/GDP	0.085 (1.544)	0.132	-0.120 (-0.961)	0.345	-0.158 (-1.499)	0.144
ECM(-1)	-0.952*** (-6.524)	0.000	-0.887*** (-7.817)	0.000	-0.893*** (-4.247)	0.000
Test statistic	**South Africa**		**Lesotho**		**Botswana**	
R-squared	0.672		0.856		0.755	
R-bar squared	0.587		0.793		0.641	
SE of regression	1.674		1.875		3.032	
F-stat	9.067[0.000]		22.816 [0.000]		9.994[0.000]	
RSS	86.942		80.848		238.944	
DW	2.120		2.586		31.983	
AIC	-81.285		-73.970		-103.686	
SBC	-88.885		-82.365		-114.499	

Note: *, ** and *** denote statistical significance at 10%, 5% and 1% levels respectively. T-ratios are in parentheses ().

The long-run results for Equation 4 reported in Table 7.9 indicate that the coefficient of trade openness index is positive and significant in Botswana, but is insignificant in South Africa and Lesotho. For Botswana, a positive coefficient of trade openness index indicates that the country trades more than its potential, thus, positive measures adopted in the country are likely to be

correlated with high rates of economic growth. Contrary to expectations of this study, the results for South Africa and Lesotho rule out the existence of a significant impact of trade openness on economic growth in these two economies, after purging the country size and geography.

Other long-run results show that the coefficient of investment is statistically insignificant in all three countries, which rules out the effect of capital accumulation on economic growth. In addition, the results show that the coefficient of government consumption expenditure is negative and significant in South Africa, positive and significant in Lesotho, but is insignificant in Botswana. The results also show that the coefficient of inflation rate is negative and statistically significant in South Africa, but is insignificant in Lesotho and Botswana. The long-run results also show that the coefficient of financial development variable, M2/GDP, is insignificant in South Africa and Botswana, but is positive and statistically significant in Lesotho.

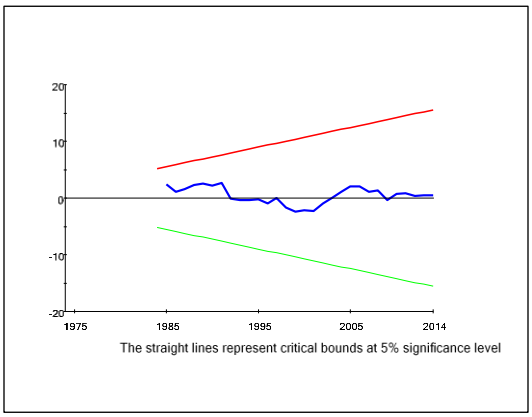
The short-run results indicate that the coefficient of trade openness is insignificant in South Africa and Lesotho but is positive and statistically significant in Botswana. For Botswana, these results indicate that trade openness has a positive impact on economic growth in that an increase in trade openness leads to an increase in economic growth even if the effects of country size and geography are purged. Other short-run results show that the coefficient of investment is insignificant in South Africa, Lesotho and Botswana. The results also show that the coefficient of government consumption expenditure is negative and statistically significant in all three countries. Moreover, in South Africa, the coefficient of inflation rate is negative and statistically significant, suggesting that inflation has a negative impact on economic growth in the country. In addition, the results show that in the case of Lesotho, the coefficient of inflation rate is insignificant, whereas it is positive and statistically significant in Botswana. The results for financial development, M2/GDP, show that the coefficient of financial development is insignificant in all the three study countries.

The results show further that the coefficients of the error correction terms for all three countries are negative and statistically significant as expected. The ECM results show that economic growth rate responds to deviations in the long-run equilibrium by 95%, 89% and 89% in South Africa, Lesotho and Botswana respectively. The results also show that the corresponding adjusted R-squared values are 59%, 79%, and 64% for South Africa, Lesotho and Botswana, which indicate the goodness of fit for the ARDL Equation 4. These results indicate a fair goodness of fit in these three countries. Figure 7.4 shows the residual plots for the ARDL Equation 4 for South Africa, Lesotho and Botswana. These residual plots provide further insights into the stability of the model.

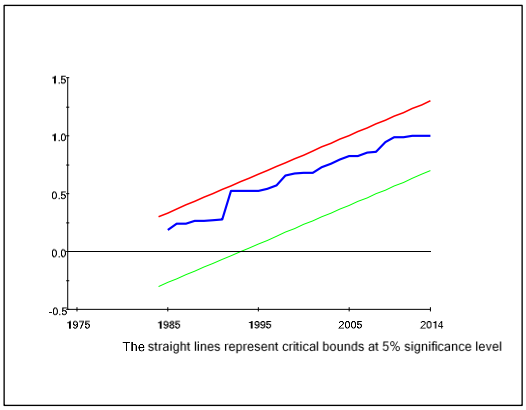
Figure 7.4 Plot of Cusum and CusumQ of Equation 4

South Africa

Plot of Cumulative Sum of Recursive Residuals

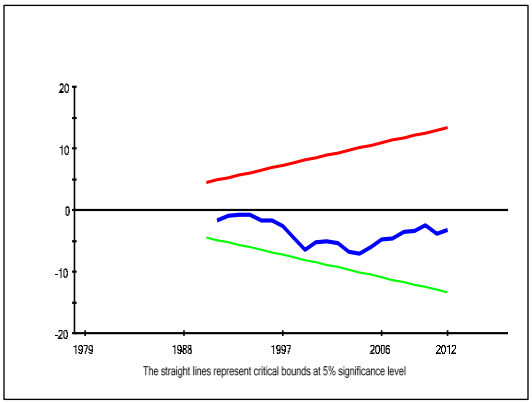


Plot of Cumulative Sum of Squares of Recursive Residuals

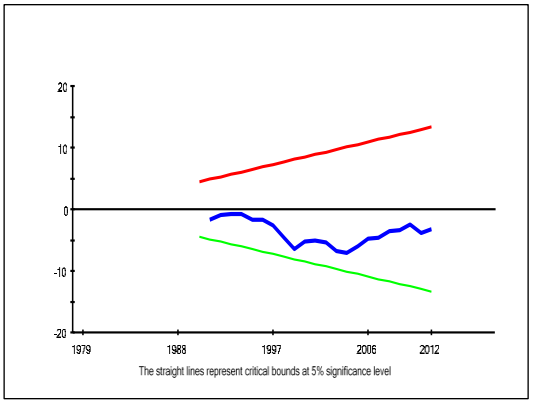


Lesotho

Plot of Cumulative Sum of Recursive Residuals

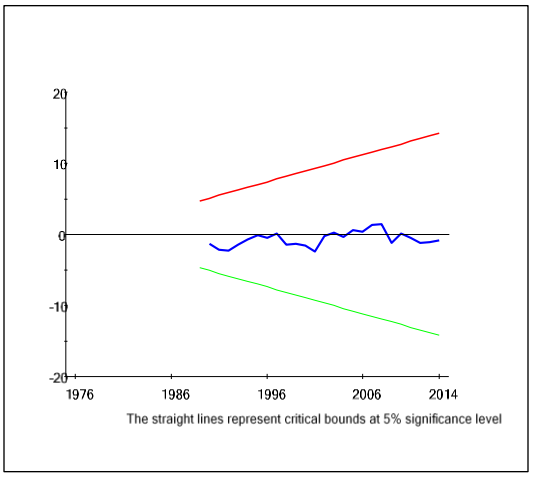


Plot of Cumulative Sum of Squares of Recursive Residuals

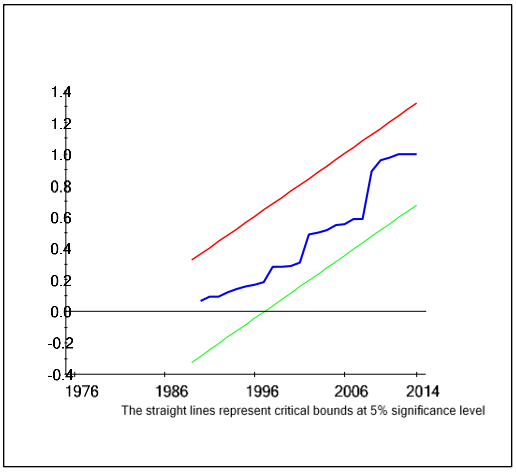


Botswana

Plot of Cumulative Sum of Recursive Residuals



Plot of Cumulative Sum of Squares of Recursive Residuals



The residual plots for the CUSUM and the CUSUMQ displayed in Figure 7.4 lie within the boundaries. These results indicate that Equation 4 is stable in all three countries.

7.7 Summary of empirical results (all countries)

Table 7.10 presents the summary of the results on the impact of trade openness on economic growth in all three study countries.

Table 7.10 Summary of the results on the impact of trade openness on economic growth

	Equation 1		Equation 2		Equation 3		Equation 4	
	Short run	**Long run**	**Short run**	**Long run**	**Short run**	**Long run**	**Short run**	**Long run**
South Africa	+	+	+	None	+	None	None	None
Lesotho	None	None	None	None	None	None	None	None
Botswana	+	+	+	+	None	None	+	+

Notes: '+' indicates a statistically significant and positive impact; '–' indicates a statistically significant and negative impact; while 'None' indicates no impact of trade openness on economic growth.

As reported in Table 7.10, the results for Equation 1 show that trade openness has a distinct positive impact on economic growth in South Africa and in Botswana, but has no significant impact on economic growth in Lesotho. For Equation 2, the results show that trade openness has a positive impact on economic growth in South Africa and in Botswana but has no significant impact on economic growth in Lesotho. The results for Equation 3 show that trade openness has a positive impact on economic growth in South Africa in the short-run but has no significant impact on economic growth in Lesotho and Botswana. The results further show that for Equation 4, trade openness has no impact on economic growth in South Africa and Lesotho, but has a positive impact on economic growth in Botswana. Overall, this summary of results suggests that the way trade openness affects economic growth is unique to each country and is dependent on the proxy for trade openness targeted and timeframe considered. Based on the summary of the results, in the cases of South Africa and Botswana, the indication is that trade openness has an overall positive impact on economic growth. For Lesotho, all the results show that trade openness has no significant impact on economic growth.

7.8 Conclusion

This chapter provided an empirical analysis of trade openness and economic growth in three SACU countries – South Africa, Lesotho and Botswana. The study used four different proxies of trade openness to investigate the impact of trade openness on economic growth. Each one of these proxies addresses a different aspect of trade openness. The first proxy used is the ratio of total trade to GDP (OPEN1), which is treated as a conventional measure of trade openness. Other proxies used include the ratio of exports to GDP (OPEN2), and the ratio of imports to GDP (OPEN3). These are additional proxies capturing the separate effects of exports and imports in the respective growth regressions. The fourth proxy, (OPEN4), is the index of trade openness. The aim of this proxy was to allow for differences in country size and geography. The study used growth rate in the real GDP per capita as a proxy for economic growth.

Apart from the trade openness variable, four additional explanatory variables were used as control variables in the study. These control variables include investment (INV/GDP), government consumption expenditure (GOV/GDP), inflation rate (INFL), and the ratio of liquid liabilities to GDP (M2/GDP), which is used as an indicator for financial development. The empirical investigation was carried out using the ARDL approach to cointegration and error correction modelling. Unit-root tests, namely the Dickey-Fuller GLS test, the Perron test, and the Phillips-Perron test, preceded the cointegration tests, so that the order of integration of the variables could be established beforehand. The empirical results for cointegration tests indicate that there is cointegration in each one of the four ARDL equations used in the study.

On the long-run regression results, the results on the impact of trade openness on economic growth differed across the three countries. There is a strong indication from the results that the impact of trade openness on economic growth is not the same in the South Africa, Lesotho and Botswana, depending on the measure of trade openness used. When the ratio of total trade to GDP (OPEN1) is used as a proxy for trade openness, a positive impact of trade openness on economic growth is found in the case of South Africa and Botswana. For Lesotho, this indicator of trade openness leads to no significant impact on economic growth. In the second instance, when the ratio of exports to GDP is used, a positive impact of trade openness on economic growth is found in South Africa and Botswana, while in Lesotho there no significant impact. The results for the third indicator of trade openness (OPEN3) are mixed. For South Africa, the ratio of imports to GDP has a positive impact on economic growth only in the short run, while in Lesotho and Botswana, there is no significant effect of this trade openness variable. The fourth indicator of

trade openness (OPEN4), is significant only in the case of Botswana where it has a positive impact on economic growth.

Although the fourth indicator of trade openness (OPEN4) allows for comparison across the countries after the differences in country size and geography have been taken into consideration, there is little evidence on the significance of the effect of this particular variable on economic growth in the cases of South Africa and Lesotho. This makes it difficult to conclude whether the residual trade openness, resulting from purging the differences in country characteristics, has a significant effect on economic growth in South Africa and Lesotho. Nevertheless, evidence of a positive effect of OPEN4 in the case of Botswana confirms that trade openness does have a positive impact on economic growth in that country.

The indication from the above results is that overall, three out of four indicators of openness are significant in the cases of South Africa and Botswana, in which there is evidence of a positive impact of trade openness on economic growth. These results are in support of the trade-led growth hypothesis. Hence it is possible to draw a solid conclusion that trade openness has a positive impact on economic growth in South Africa and Botswana. However, for Lesotho, trade openness has an insignificant impact on economic growth as suggested by the results. In all of the four equations for Lesotho, trade openness is insignificant. This indicates that increased trade openness contributes very little to economic growth in Lesotho.

In conclusion, the results for Botswana and South Africa, which generally indicate that there is a positive relationship between trade openness and economic growth, are consistent with Brückner and Lederman (2012), and Hoeffler (2001). In the case of Lesotho, the insignificant impact of trade openness on economic growth is an indication that the country does not enjoy the benefits of trade openness, which could be related to the fact that Lesotho is a least developed country (LDC). This finding is consistent with Young (1991). Thus, with Lesotho being an LDC, even if the country reduces its tariffs and gains all the market access it requires, trade openness adds very little value to the economy.

CHAPTER 8

CONCLUSION AND POLICY IMPLICATIONS

8.1 Introduction

This chapter of the study provides concluding remarks and policy implications arising from the findings from the previous chapters. In addition, this chapter indicates areas for further research. Following the introduction, Section 8.2 presents the summary of the study, while Section 8.3 discusses the summary of empirical findings. Section 8.4 presents conclusions and policy implications of this study. Section 8.5 presents the limitations of the study and suggests areas for further research.

8.2 Summary of the study

This study examines the impact of trade openness on economic growth in three SACU countries – South Africa, Lesotho and Botswana. For South Africa and Botswana, the empirical analysis covers the period 1975 to 2014, while for Lesotho it covers the period 1979 to 2013. The study focuses on the impact of trade openness on economic growth, based on four different proxies of trade openness. In this study, the sequencing of the relevant trade-related interventions is examined for each study country, with emphasis on how these interventions relate to the origins of trade openness. The study also reviews related theoretical and empirical literature, which subsequently inform the empirical models employed in this study.

This study uses experiences of the three specific individual countries to investigate further the overall impact of trade openness on economic growth. The three countries included in this study are South Africa, Lesotho and Botswana. The justification for the choice of these countries is based on two things. First, the selection represents countries that have different levels of economic development. South Africa and Botswana are classified as upper middle-income countries, whereas Lesotho is classified as a lower middle-income country and as a least developed country (LDC). Second, the selection of the three study countries is based on countries that have different country sizes and geography.

The main objective of this study is to investigate the dynamic relationship between trade openness and economic growth in the three study countries. Trade openness and its role in economic growth is a topical issue, very much relatable to the South African Customs Union (SACU) countries. Specifically, this study seeks to: (i) test the impact of trade openness on economic growth in the study countries; (ii) test empirically whether the impact of trade openness on

economic growth depends on the proxies used to measure openness; (iii) examine the significance of the trade openness index on economic growth in the selected SACU countries; (iv) provide key policy implications based on the results from the study.

To achieve the main objectives, this study employs the endogenous growth model framework to evaluate the impact of trade openness on economic growth based on four different equations that correspond to the four proxies of trade openness used in the empirical analysis of this study. Following Yanikkaya (2003), this study uses the ratio of total trade exports to GDP as a proxy for openness in Equation 1; and the ratio of exports to GDP in Equation 2; test the ratio of imports to GDP in Equation 3. In addition to these proxies, the study also employs the trade openness index in Equation 4. The trade openness index is derived from the ordinary least squares (OLS) regression in which trade openness is explained by country size and geography. Thereafter, the difference between actual trade openness and predicted trade openness, which is residual openness, is used as a proxy in Equation 4. The trade openness index employed in this study allows for comparison of trade openness across countries after taking differences in country size and geography into consideration.

Regarding the hypotheses, this study tests five hypotheses. The first is that trade openness, measured by the ratio of total trade to GDP, has a positive impact on economic growth. The second hypothesis is that trade openness, measured by the ratio of exports to GDP, has a positive impact on economic growth. The third hypothesis is that trade openness, measured by the ratio of imports to GDP, has a positive impact on economic growth. The fourth hypothesis is that the trade openness index, based on country size and geography, has a positive impact on economic growth. Lastly, the fifth hypothesis is that the impact of trade openness on economic growth depends on the proxy used to measure trade openness.

To examine the dynamic linkages between trade openness on economic growth, the study uses the auto-regressive distributed lag (ARDL) bounds testing approach and the ECM-based ARDL model. To confirm that there is no variable that is integrated of an order higher than one [1], this study employs three different unit root tests: the Dickey-Fuller generalised least squares (DF-GLS), the Phillips-Perron test, and the Perron (1997) test.

8.3 Summary of empirical findings

The overall empirical findings of this study reveal that:

1. Trade openness does not have the same impact on economic growth in the three study countries. The findings for Equation 1, in which the ratio of total trade to GDP was used as a proxy for trade openness, show that trade openness has a positive impact on economic growth in South Africa and Botswana in both the short and long run. This finding is consistent with Karras (2003), Hassan (2005), Rao and Rao (2009), and Makun (2017), among other studies. For Lesotho, the empirical findings show that trade openness has no significant impact on economic growth. Although this finding contradicts the expectations of this study, it is not surprising given the nature of Lesotho's economy as explained in previous sections of this study. As outlined in Young (1991), the least developed countries (LDCs) tend to experience dynamic losses from trade with respect to technical progress and economic growth. Therefore, the overall effect of trade openness on economic growth could be insignificant in the case of LDCs. 2. In Equation 2, in which trade openness was measured using the ratio of exports to GDP, the study finds that trade openness has a positive impact on economic growth in South Africa in the short run, but not in the long run. For Botswana, the empirical findings show that trade openness, measured by the ratio of exports to GDP, has a positive impact on economic growth in both the short and the long run. This finding is consistent with Singh (2011). However, in the case of Lesotho, the study finds the impact of trade openness on economic growth to be insignificant in both the short run and the long run.

3. In Equation 3, where trade openness was measured using the ratio of imports to GDP, the study finds that trade openness has a positive impact on economic growth in South Africa in the short run, but not in the long run. These findings are consistent with Awokuse (2008). For Lesotho, the study finds that trade openness has a no significant impact on economic growth in the short run and in the long run. In the case of Botswana, this study finds no significant impact of trade openness on economic growth when the ratio of imports to GDP is employed as a proxy for trade openness.

4. In Equation 4, in which the study employs the index of trade openness as a proxy for trade openness, the study finds that trade openness index has no significant impact on economic growth in South Africa and Lesotho, whether in the short or the long run. For Botswana, the study finds that trade openness has a positive impact on economic growth. The results for Botswana

show that trade openness has a positive impact on economic growth irrespective of whether country size and geography have been incorporated.

5. Based on the results of the four equations used in this study, the hypothesis that trade openness, measured by the ratio of total trade to GDP, has a positive impact on economic growth can be accepted for South Africa and Botswana, but is rejected in the case of Lesotho. Similarly, the hypothesis that trade openness, measured by the ratio of exports to GDP, has a positive impact on economic growth, can be accepted for South Africa and Botswana, but not in Lesotho. Then again, the hypothesis that trade openness, measured by the ratio of imports to GDP, has a positive impact on economic growth, can be accepted for South Africa only. On the other hand, the hypothesis that trade openness has a positive impact on economic growth can be accepted for Botswana only. Lastly, the results for all equations show that the hypothesis that the impact of trade openness on economic growth depends on the proxy used can be accepted in all three study countries (South Africa, Lesotho and Botswana).

8.4 Conclusions and policy recommendations

Based on the empirical findings of this study, this study reaches the following conclusions and policy recommendations:

1. Trade openness, based on the ratio of total trade to GDP, has a positive impact on economic growth in South Africa and Botswana. Thus, the recommendation for these two countries is that the policy-makers should pursue policies that promote total trade so as to increase economic growth in both the short and the long run. In Lesotho, the study found no significant influence of trade openness on economic growth in either the short or the long run. This study suggests that Lesotho adopt policies aimed at boosting human capital and infrastructural development so that the economy grows to a threshold level required to reap the benefits of trade openness in its various forms.

2. Trade openness, based on the ratio of exports to GDP, has a positive impact on economic growth in South Africa and Botswana. Therefore, the study recommends that the policy-makers in South Africa and Botswana encourage the adoption of export-promoting policies in their economies. For Lesotho, this study finds that trade openness, based on the ratio of exports to GDP, has no significant impact on economic growth, suggesting that the increased share of exports to GDP has not benefited the country's economic growth.

Hence, for Lesotho, this study recommends that policies aimed at enhancing export-led growth in the country be re-examined, so that the country focuses on the production of high value-added export products. Among other things, policies aimed at widening exports and improving industrial capacity should be targeted.

3. Trade openness, based on the ratio of imports to GDP, has a positive impact in South Africa, but no impact in Lesotho and Botswana. For Lesotho and Botswana, this study recommends that the policy-makers should revisit the combination of imports such that economic growth in these countries could be boosted by the imports sector. For South Africa, the study recommends the pursuit of policies that reduce restrictions on imports.

4. Trade openness, based on the trade openness index, has a positive impact on economic growth in Botswana, but not in South Africa and Lesotho. Therefore, for Botswana, this study recommends the adoption of policies that promote increased trade openness in the country. For South Africa and Lesotho, the study recommends the creation of structural measures to ensure that these countries trade to their full capacity given their area and geography. Such measures should target infrastructural and industrial developments.

8.5 Limitations of the study and areas for further research

Although the study has made significant efforts to make sure that the study results are analytically defensible, a few limitations may have affected it, as is the case in many scientific research studies.

First, due to data limitations in some of the study countries, the study did not use all variables that affect economic growth. Based on this limitation, future studies may consider including other variables in the growth equation. Second, the study uses three trade-based proxies of trade openness, and an openness index constructed. Future studies may benefit from using other proxies of trade openness. Thirdly, this study uses aggregated data because disaggregated data is not available for all the countries studied. Future studies may wish to employ disaggregated data for countries where such data is available.

Even though these limitations could have affected the emerging evidence of this study, the researcher anticipates that their overall effects are minimal and so might not have had a significant influence on the theoretical and empirical findings of this study.

REFERENCES

Adhikary, B.K. 2011. 'FDI, Trade openness, capital formation, and economic growth in Bangladesh: a linkage analysis', *International Journal of Business and Management*, 6 (1): 16-28.

Agbetsiafa, D.K. 2010. 'Regional integration, trade openness and economic growth: causality evidence from UEMOA countries', *International Business and Economic Research Journal,* 9(10) :55-67.

Africa Institute. 1966. *Lesotho: economic structure and growth.* Communications of Africa Institute. No 5. Pretoria: Africa Institute.

African Development Bank. 2009. *Botswana country strategy paper, 2009-2013*. Abidjan: African Development Bank.

African Growth and Opportunity Act "AGOA". 2014. *Bilateral trade by sector: US-South Africa*. AGOA.info. Available from:<http://agoa.info/profiles/southafrica.html#table_data> [Accessed 28 August 2014]

Akinboade, O.A. 1998. 'Financial development and economic growth in Botswana: a test for causality'*, Savings and Development*, 22(3): 331-348.

Alcala, F. and Ciccone, A. 2004. 'Trade and productivity', *The Quarterly Journal of Economics*, 119(1): 613-646.

Allen, D.S. and Ndikumana, L. 2000. 'Financial intermediation and economic growth in Southern Africa', *Journal of African Economies*, 9(2): 132-160.

Altman, M. 1994. 'GATT and the reform of the South African clothing industry', *South African Industry,* 1(2): 20-26.

Andersen, L. and Babula, R. 2008. 'The link between openness and long-run economic growth', *Journal of International Commerce and Economics*, 2: 1-20.

Anderson, E. 2005. 'Openness and inequality in developing countries: a review of theory and recent evidence, *World Development*, 33(7): 1045-1063.

Asea, P.K and Mendoza, E.G. 1994. 'The Balassa-Samuelson model: a general-equilibrium appraisal', *Review of International Economics*, 2(3): 244-267.

Awokuse, T.O. 2008. 'Trade openness and economic growth: is growth export-led or import-led?', *Applied Economics*, 40(2): 161-173.

Babatunde, A. 2011. 'Trade openness, infrastructure, FDI and growth in sub-Saharan African countries', *Journal of Management Policy and Practice*, 12(7): 27-36.

Badinger, H. 2008. 'Technology- and investment-led growth effects of economic integration: a panel cointegration analysis for the EU15 (1960-2000)', *Applied Economics Letters,* 15(7): 557-561.

Badinger, H. 2005. 'Growth effects of economic integration: evidence from EU member states', Review *of World Economics*, 141(1): 50-78.

Barclays Bank International Ltd. 1978. *Economic conditions in Lesotho*. South Africa: Barclays Bank International.

Baer, W. 1972. 'Import substitution industrialisation in Latin America: experiences and interpretations', *Latin American Research Review*, 7(1)1: 95-122.

Balassa, B. 1964. 'The Purchasing power parity doctrine: a reappraisal', *Journal of Political Economy*, 72(6): 584-596.

Balassa, B. 1978. 'Exports and economic growth', *Journal of Development Economics*, 5(2): 181-189.

Balassa, B. and Balassa, C. 1984. 'Industrial protection in the developed countries', *The World Economy*, 7(2): 179-196.

Balassa, B. 1985. 'Exports, policy choices, and economic growth in developing countries after the 1973 oil shock', *Journal of Development Economics*, 18(1): 23-35.

Baldwin, R. 1989. 'The growth of effects 1992', *Economic Policy*, 4(9): 247-282.

Baldwin, R. 1993. 'On the measurement of dynamic effects of integration'. *Empirica,* 20(2): 129-145.

Baldwin, R. and Seghezza, E. 1996. Testing for trade-induced investment-led growth. NBER Working Paper 5416. Massachusetts: National Bureau of Economic Research.

Baldwin, R.E. and Forslid, R. 2000. 'Trade liberalisation and endogenous growth: a q theory', *Journal of International Economics*, 50(2): 497-517.

Balgati, B.H. 2008. *Econometric analysis of panel data*. 4th ed. Great Britain: John Wiley & Sons.

Balgati, B.H., Demetriades, P.O, and Law, S.H. 2009. 'Financial development and openness: evidence from panel data', *Journal of Development Economics*, 89(2): 285-296.

Banerjee, A., Dolado, J. and Mestre, R. 1998. 'Error-correction mechanism tests for cointegration in a single-equation framework', *Journal of Time Series Analysis*, 19(3): 267-283.

Barrow, R.J. 1991. 'Economic growth in a cross section of countries', *The Quarterly Journal of Economics*, 106(2): 407-443.

Barro, R.J. 1999. 'Determinants of economic growth: implications of the global evidence for Chile', *Cuadernos de Economía*, 443-478.

Barro R.J. and Sala-i-Martin, X. 2003. *Economic Growth*. 2nd ed. Cambridge: The MIT Press.

Barro. R.J. 1991. 'Economic growth in a cross section of countries'. *Quarterly Journal of Economics*, 106(2): 407-443.

Bell, T. 1992. Should South Africa further Liberalise its Foreign Trade? Economic Trends Research Group Working Paper 16. Economic Trends Research Group.

Bell, T. 1997. 'Trade Policy'. In Michie, J. and Padayachee, V. eds. *The Political Economy of South Africa's Transition*. London: Dryden Press. 71-88.

Ben-David, D. 1993. 'Equalizing exchange: trade liberalization and income convergence'. *Quarterly Journal of Economics*, 108(3): 653-679.

Ben-David, D. 1996. 'Trade and convergence among countries', *Journal of International Economics*, 40(3-4): 279-298.

Beshkar, M., Bond, E. W. and Rho, Y. 2015. 'Tariff binding and overhang: theory and evidence', *Journal of International Economics*, 97(1): 1-13.

Bentzen, J, and Engsted, T. 2001. 'A revival of the autoregressive distributed lag model in estimating energy demand relationships', *Energy*, 26(1): 45-55.

Bhagwati, J. 1958. 'Immiserizing growth: a geometrical note', *The Review of Economic Studies*, 25(3): 201-205.

Bittencourt, M., Van Eyden, R. and Seleteng, M. 2015. 'Inflation and economic growth: evidence from the Southern African Development Community', *South African Journal of Economics*, 83, (3): 411-424.

Bitzer, J. and Geishecker, I. 2000. 'What drives trade-related R&D spillovers? decomposing knowledge-diffusing trade flows', *Economics Letters*, 93(1): 52-57.

Blonigen, B.A. 2014. 'Industrial policy and downstream export performance', *The Economic Journal*, 126(1635): 1635-1659.

Board of Trade and Industry. 1970. *Report for the 1970 Calendar Year*. Report No 1 355. Pretoria: Government Printer.

Botswana. *Vision 2016: towards prosperity for all.* Available from: <http://www.vision2016.co.bw/tempimg/media/mediac_103.pdf > [Accessed 13 February 2014]

Brazil Ministry of Foreign Affairs. 2016. *Entry into force of the Mercosur-SACU Preferential Trade Agreement*. Press Release: 1 April, 13:22. Available from: <<http://www.itamaraty.gov.br/en/press-releases/13722-entry-into-force-of-the-mercosur-sacu-preferential-trade-agreement > [Accessed 14 June 2018]

Brückner, M. and Lederman, D. 2012. Trade causes growth in sub-Saharan Africa. World Bank Policy Research Working Paper 6007. Poverty Reduction and Economic Management Network, International Trade Department. The World Bank, Washington.

Brülhart, M. 2011. 'The spatial effects of trade openness: a survey', *Review of World Economy*, 147(1): 59-83.

Bruton, H.J. 1968. 'Import substitution and productivity growth', *The Journal of Development Studies*, 4(3): 306-326.

Bruton, H.J. 1989. 'Import substitution', *Handbook of Development Economics*, 2:1601-1644.

Bruton, H.J. 1998. 'A reconsideration of import substitution', *Journal of Economic Literature*, 36(2): 903-936.

Bullard, J. and Keating, J.W. 1995. 'The long-run relationship between inflation and output in postwar economies', *Journal of Monetary Economics*, 36(3): 477-496.

Central Bank of Lesotho. 2003. *Annual Report*. Maseru: Central Bank of Lesotho.

Central Bank of Lesotho. 2004. *Annual Report*. Maseru: Central Bank of Lesotho.

Central Bank of Lesotho. 2005. *Annual Report*. Maseru: Central Bank of Lesotho.

Central Bank of Lesotho. 2012. *Annual Report*. Maseru: Central Bank of Lesotho.

Central Bank of Lesotho. 2013. *Annual Report*. Maseru: Central Bank of Lesotho.

Central Bank of Lesotho. 2004. *Lesotho Vision 2020: The Way Forward*. Maseru: Central Bank of Lesotho.

CREFSA. 1998. 'Macroeconomic policies to support a SADC free trade area', *London School of Economics Quarterly Review,* 2: 1-36.

Chang, C-C. and Mendy, M. 2012. 'Economic growth and openness in Africa: what is the empirical relationship?', *Applied Economics Letters*, 19(18): 1903-1907.

Chen, D.H.C. and Kee, H.L. 2005. A model on knowledge and endogenous growth. World Bank Policy Research Working Paper 3539. The World Bank.

Cheng, P-P and Gupta, R. 2006. An investigation of openness and economic growth using panel estimation. University of Pretoria Working Paper No 2006 – 22. University of Pretoria.

Chipaumire, G, Ngirande, H, Method, M, and Ruswa, Y. 2014. 'The impact of government spending on economic growth: Case South Africa', *Mediterranean Journal of Social Sciences*, 5(5): 109-118.

Chipman, J.S. 1969. 'Factor Price Equalisation and the Stolper-Samuelson Theorem', *International Economic Review*, 10(3): 399-406.

Chirwa, T.G. and Odhiambo, N.M. 2017. 'Sources of economic growth in Zambia: an empirical investigation', *Global Business Review*, 18(2): 275-290.

Coe, D.T. and Helpman, E. 1995. 'International R&D spillovers', *European Economic Review*, 39(5): 859-887.

Coe, D.T. and Moghadam, R. 1993. Capital and trade as engines of growth in France: an application of Johansen's cointegration methodology. IMF Staff Working Paper WP/93/11. International Monetary Fund.

Coulomb, F. 1998. 'Adam Smith: a defense economist', *Defense and Peace Economics*, 9(3): 299-316.

Dahl, H-E. 1981. 'Economic and Social Development in Botswana'. In *Papers on the Economy of Botswana*. Harvey, C. ed. Heinemann: London.

Dar, A. and Amirkhalkhali, S. 2010. 'On the impact of trade openness on growth: further evidence from OECD countries', *Applied Economics*, 35(16): 1761-1766.

Department for Business Innovation and Skills. 2015. *BIS performance indicators*. Available from: <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/401199/openness-to-trade-exports-plus-imports-as-a-share-of-gdp-ranked-against-major-competitiors.pdf >
[Accessed 16 October 2015]

Department of Trade and Industry "DTI". 1990. *Annual Report*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry "DTI". 1992. *Guidelines in Respect of the General Export Incentive Scheme (GEIS)*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry "DTI". 1994. *Annual Report*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry "DTI". 1999. *Annual Report*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry "DTI". 2000. *Executive Summary 1999/2000*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry "DTI". 2010. *South African Trade Policy and Strategy Framework*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry “DTI”. 2013. *Export Marketing and Investment Assistance (EMIA): Group Outward Trade Mission Guidelines*. Pretoria: Department of Trade and Industry.

Department of Trade and Industry “DTI”. No date. *Summary of main trade agreements between South Africa and the rest of the world*. Pretoria: DTI. Available from: < https://www.thedti.gov.za/trade_investment/ited_trade_agreement.jsp > [Accessed 2 February 2013]

Department of Trade and Industry “DTI”. No date. Summary of main trade agreements between South Africa and the rest of the world. Pretoria: DTI. Available from: < https://www.thedti.gov.za/trade_investment/emia.jsp > [Accessed 20 August 2018]

Dixit, A.K. and Grossman, G.M. 1986. ‘Targeted export promotion with several oligopolistic industries’, *Journal of International Economics*, 21(3-4): 233-250.

Dollar, D. 1992. ‘Outward-oriented developing economies do grow more rapidly: evidence from 95 LDCs, 1976-1985’, *Economic Development and Cultural Change*, 40(3): 523-544.

Drine, I. and Rault, C. 2010. ‘Do panel data permit the rescue of the Balassa-Samuelson hypothesis for Latin American countries?’, *Applied Economics*, 35(3): 351-359.

Du Plessis S. and Smit, B. 2006. ‘Economic growth in South Africa since 1994. Stellenbosch Economic Working Paper 1:/2006. Bureau for Economic Research. University of Stellenbosch.

East African Community “EAC”. No date. COMESA-EAC-SADC Tripartite. Available from: <https://www.eac.int/tripartite> [Accessed 20 August 2018]

Easterly, W. 1993. ‘How much do distortions affect growth?’, *Journal of Monetary Economics*, 32(2): 187-212.

Eaton, J. and Grossman, G. 1986. ‘Optimal Trade and Industrial Policy under Oligopoly’, *Quarterly Journal of Economics*, 101(2): 383-406.

Economist Intelligence Unit “EIU”. 1987. *Country Report: Botswana*. London: Economist Intelligence Unit.

Economist Intelligence Unit “EIU”. 1996. *Country Report: Botswana*. London: Economist Intelligence Unit.

Economist Intelligence Unit “EIU”. 2000. *Country Report: Botswana*. London: Economist Intelligence Unit.

Edwards, L. 2006. *Has South Africa liberalised its trade: paper prepared for the Trade and Poverty Project.* Southern African Labour and Development Research Unit: University of Cape Town.

Edwards, L. and Alves, P. 2005. South Africa’s export performance: determinants of export supply. *Africa Region Working Paper Series No 95.* University of Cape Town.

Edwards, L. and Lawrence, R. 2006. South African trade policy matters: trade performance and trade policy. Harvard University. *Harvard University Center for International Development Working Paper No 135.*

Edwards, S, 1989. Openness, Outward Orientation, Trade Liberalization and Economic Performance in Developing Countries. *National Bureau of Economic Research Working Paper 2908.*

Edwards, S. 1992. ‘Trade orientation, distortions and growth in developing countries’, *Journal of Development Economies*, 39(1): 31-57.

Edwards, S. 1993. ‘Openness, trade liberalization, and growth in developing countries’, *Journal of Economic Literature*, 31(3): 1358-1393.

Edwards, S. 1997. ‘Openness, productivity and growth: what do we really know? *National Bureau of Economic Research Working Paper 5978*.

Edwards, S. 1998. ‘Openness, productivity and growth: what do we really know?’, *The Economic Journal*, 108(447): 383-398.

EFTA. Free Trade Agreement between EFTA and SACU. Accessed online on 02/09/2013 at http://www.efta.int/free-trade/free-trade-news/2008-05-05-efta-sacu-fta-enters-into-force.aspx

Elbadawi, I., and Schmidt-Hebbel, K. 1999. ‘Macroeconomic policies, instability and growth in the world’, *Journal of African Economies*, 7(2): 116-168.

Enders, W. 2004. *Applied Econometric Time Series.* 2nd ed. United States of America: John Wiley & Sons.

Enhanced Integrated Framework. 2002. *Trade mainstreaming country review: Lesotho*. Available from: <http://www.eif.org.ls/docs/Trade%20Mainstreaming%20Study.pdf>
[Accessed 26 January 2015]

Enhanced Integrated Framework. 2003. *Integrated framework diagnostic trade integration study: Lesotho.* Available from:
<http://enhancedif.org/en/system/files/uploads/lesotho_dtis_20vol.1.pdf>
[Accessed 26 January 2015]

Enhanced Integrated Framework. 2013. *The enhanced integrated framework: an overview*. Available from: <http://enhancedif.org>
[Accessed 26 January 2015]

Enhanced Integrated Framework. 2014. *Enhanced integrated framework: Lesotho.* Available from: <http://enhancedif.org/en/country-profile/lesotho >
[Accessed on 26 January 2015]

Eris, N.M. and Ulasan, B. 2013. 'Trade openness and economic growth: Bayesian model averaging estimate of cross-country regressions', *Economic Modelling*, 33, 867-883.

European Commission. 2010. *The Cotonou Agreement*. Available from: <http://trade.ec.europa.eu>
[Accessed 3 December 2014].

European Commission. 2013. *Everything But Arms (EBA) – who benefits*? Available from: <http://trade.ec.europa.eu/doclib/docs/2013/april/tradoc_150983.pdf>
[Accessed 1 December 2014].

European Commission. 2014. *Generalised system of preferences*. Available from: <http://ec.europa.eu/taxation_customs/customs/customs_duties/rules_origin/preferential/article_781_en.htm>
[Accessed on 3 December 2014]

European Commission. 2016. *Economic Partnership Agreement (EPA) between the European Union and the Southern African Development Community (SADC) EPA Group.*

Available from: <http://trade.ec.europa.eu/doclib/docs/2014/october/tradoc_152818.pdf>
[Accessed 20 July 2018]

Evenson, R.E. and Singh, L. 1997. Economic Growth, International Technological Spillovers and Public Policy: Theory and Empirical Evidence from Asia. *Yale University Economic Growth Centre Discussion Paper No 777*.

Fajgelbaum, P.D. 2013. Labour market frictions, firm growth, and international trade. *National Bureau of Economic Research Working Paper No 19492.*

Farrel, G.N. 2001. Capital controls and the volatility of South African exchange rates. *South African Reserve Bank Occasional Paper No 15.*

Feder, G. 1983. 'On exports and economic growth', *Journal of Development Economics*, 12(1-2): 59-73.

Fedderkke, J. and Garlick, R. 2008. Infrastructure development and economic growth in South Africa: a review of the accumulated evidence. *University of Cape Town Policy Paper No12.*

Feeney, J. and Hillman, A. 1998. Privatisation and endogenous strategic trade policy. *University of Colorado Department of Economics Working Paper 98-21.*

Fine, B. and Rustomjee, Z. 1996. *The political economy of South Africa, from minerals-energy complex to industrialisation*. London: C Hurst & Co (Publishers) Ltd.

Fischer, S. 1992. *Overview: The conventional wisdom and the new growth theory*. Available from: <https://www.kansascityfed.org/publicat/sympos/1992/s92fisch.pdf> [Accessed 30 June 2011]

Fischer, S. 1993. 'The role of macroeconomic factors in growth', *Journal of Monetary Economics*, 32(3): 485-512.

Flatters, F. and Stern M. 2007. Trade and trade policy in South Africa: recent trends and future prospects. Development Network Africa. Cape Town.

Fonatana, M. 2003. The gender effects of trade liberalisation in developing countries: a review of the literature. *University of Sussex Discussion Papers in Economics DP101.*

Frankel, J.A. and Romer, D. 1999. 'Does trade cause growth?' *The American Economic Review*, 89(3): 379-399.

Gallup, J.L., Sachs, J, and Mellinger, A.D. 1998. *Geography and economic growth*. Washington: The World Bank.

General Agreement on Tariffs and Trade “GATT”. 1947. *The General Agreement on Tariffs and Trade*. Geneva: World Trade Organisation.

General Agreement on Tariffs and Trade “GATT”. 1986. The text of the General Agreement on Tariffs and Trade. Geneva: World Trade Organisation.

Gaolathe, N, 1997. ‘Botswana’s boom and recession experience: a discussion’ In Aspects of the Botswana Economy. Salkin, J.S., Mpabanga, D., Cowan D., Selwe, J. and Wright, M. eds. United Kingdom: Oxford Publishers.

GATT. 1993. *Trade policy review of South Africa*. Geneva: World Trade Organisation. Available from: < http://www.wto.org/gatt_docs/English/SULPDF/91710060.pdf >
[Accessed 27 September 2013]

Ghatak, S. and Siddiki, J.U. 2001. ‘The use of the ARDL approach in estimating virtual exchange rates in India’, Journal of Applied Statistics, 28(5): 573 - 583.

Gidlow, R.M. 1988. ‘Workings of a managed floating exchange rate system for the rand’, *South African Journal of Economics*, 56(2): 137-153.

Gouws, A.R. 2005. The determinants of South African exports: critical policy implications. PhD Economics Thesis. University of Pretoria, Pretoria.

Greenway, D. and Nam, H.C. 1988. ‘Industrialisation and macroeconomic performance in developing countries’, *Kyklos*, 41(3): 419 - 435.

Gries, T., Kraft, M. and Meierrieks, D. 2009. ‘Linkages between financial deepening, trade openness, and economic development: causality evidence from sub-Saharan Africa’, *World Development*, 37(12): 1849-1860.

Grossman, G.M. and Helpman, E. 1989a. Growth and welfare in a small open economy. *National Bureau of Economic Research Working Paper 2970.*

Grossman, G.M. and Helpman, E. 1989b. ‘Product development and international trade’, *The Journal of Political Economy*, 97(6): 1261-1283.

Grossman, G.M. and Helpman, E. 1990. ‘Trade, innovation and growth’, *The American Economic Review*, 80(2): 86-91.

Grossman, G.M. and Helpman, E. 1991a. 'Trade, knowledge spillovers and growth', *European Economic Review*, 35(2-3): 517-526.

Grossman, G.M, and Helpman, E. 1991b. *Innovation and Growth in the Global Economy*. Massachusetts: Massachusetts Institute of Technology.

Grossman, G.M. and Helpman, E. 1990. 'Comparative advantage and long run growth'*. American Economic Review*, 786-815.

Gupta, S, Clements, B, Baldacci, E, and Mulas-Granados, C. 2005. 'Fiscal policy, expenditure composition and growth in low-income countries', *Journal of International Money and Finance*, 24(3): 441-463.

Gustafsson, P. and Segerstrom, P. 2010. 'Trade Liberalisation and Productivity Growth', *Review of International Economics*, 18(2): 207-228.

Harrod, R. 1948. *Towards a Dynamic Economics: Some Recent Developments of Economic Theory and Their Applications to Policy.* London: Macmillan.

Hassan, A.F.M. 2005. 'Trade openness and economic growth: search for causal relationship', *South Asian Journal of Management*, 12(4): 38-51.

Hassler, U. and Wolters, J. 2006. 'Autoregressive distributed lag models and cointegration'. In *Modern Econometric Analysis.* Berlin Heidelberg: Springer. 57-72.

Havrylyshyn, O. 1990. 'Trade policy and productivity gains in developing countries: a survey of literature', *The World Bank Research Observer*, 5(1): 1-24.

Helpman, E. and Itskhokhi, O. 2010. 'Labour market rigidities, trade and unemployment', *Review of Economic Studies,* 77(2): 1100-1137.

Henrekson, J., Torstensson, J. and Torstensson, R. 1997. 'Growth effects of European integration', *European Economic Review*, 41(8): 1537-1557.

Hirsch, A. 1994. South Africa and the GATT. The South African Institute of International Affairs. Johannesburg.

Hoeffler, A. 2001. 'Openness, investment and growth', *Journal of African Economies*, 10(4): 470-497.

Hodge, D. 2006. Inflation and growth in South Africa, *Cambridge Journal of Economics*, 30(2): 163-180.

Hye, Q.M.A. and Lau, W-Y. 2015. 'Trade openness and economic growth: empirical evidence from India', *Journal of Business Economics and Management*, 16(1): 188-205.

Hviding, K. 2006. 'Liberalizing trade and capital transactions: an overview' In *Post-apartheid South Africa*. Nowak, M. and Ricci, L.A. eds. Washington: International Monetary Fund.

Im, K., Pesaran, M. and Shin, Y. 1997. Testing for unit roots in heterogeneous panels. Department of Applied Economics Working Paper. University of Cambridge.

International Monetary Fund (IMF). 1981. *Direction of Trade Statistics Yearbook 1974-80*. Washington DC: International Monetary Fund.

International Monetary Fund (IMF). 1989. *Direction of Trade Statistics Yearbook 1982-89* Washington DC: International Monetary Fund.

International Monetary Fund (IMF). 1990. *Direction of Trade Statistics Yearbook 1990-93*. Washington DC: International Monetary Fund.

International Monetary Fund (IMF). 2001. *Direction of Trade Statistics Yearbook 1994-00.* Washington DC: International Monetary Fund.

International Monetary Fund (IMF). 2006. *Kingdom of Lesotho: Poverty Reduction Strategy Paper, Prioritization, and Cost Matrix. IMF Country Report 06/143.*

International Monetary Fund (IMF). 2008. *Direction of Trade Statistics Yearbook 2008.* Washington DC: International Monetary Fund.

International Monetary Fund (IMF). 2012a. *Kingdom of Lesotho: Poverty Reduction Strategy Paper – Joint Staff Advisory. IMF Country Report 12/33.*

International Monetary Fund (IMF). 2012b. *Kingdom of Lesotho: Poverty Reduction Strategy Paper – National Strategic Development Plan. IMF Country Report 12/102.*

International Monetary Fund (IMF). 2013. *Direction of Trade Statistics Yearbook 2013*. Washington DC: International Monetary Fund.

International Trade Administration. 2011. *Textiles, apparel, footwear and travel goods: Lesotho.* Office of Textiles and Apparel Market Report/Tariffs. United States Department of Commerce. Available from: <http://web.ita.doc.gov/tacgi/OverSeasNew.nsf/alldata/Lesotho> [Accessed 30 January 2015]

Itoh, M. and Kimonos, K. 1987. Welfare-enhancing export subsidies', *Journal of Political Economy*, 95(1): 115-137.

Jenkins, C, 2001. Integration and co-operation in Southern Africa. *OECD Development Centre Working Paper 172.*

Jenkins, C., Bleaney, M. and Holden, M. 1995. Trade liberalisaion in sub-Saharan Africa: case study of South Africa. *University of Oxford Centre for the Study of African Economies WPS/96-6.*

Jin, J.C. 2000. Openness and growth: an interpretation of empirical evidence from East Asian countries', *The Journal of International Trade and Economic Development*, 9(9): 5-17.

Johnson, D.L. 1978. 'Sanctions and South Africa', *Harvard International Law Journal*, 19(3): 887

Johnson, H.G. 1955. 'Economic expansion and international trade', *The Manchester School*, 23: 95-112.

Jones, V.C. 2006. Generalized System of Preference: Background and Renewal Debate. Congressional Research Service Report. The Library of Congress: Washington.

Jonsson, G. and Subramanian, A. 2001. Dynamic gains from trade: evidence from South Africa. *IMF Staff Papers*, 48(1): 197-224.

Joubert, N. 2005. *The reform of South Africa's Anti-Dumping Regime*. In *Managing the Challenges of WTO Participation: 45 Case Studies*. Available from: <http://www.wto.org/english/res_e/booksp_e/casestudies_e/case38_e.htm> [Accessed 13 September 2013]

Jones, S. 2003. 'External trade in the 1990s'. *Journal of the Economic History of Society of South Africa,* 18(1-2): 332-365.

Jones, S. and Inggs, J. 2003. 'The South African economy in the 1990s', *Journal of the Economic History of Society of Southern Africa*, 18(1-2): 1-15.

Juselius, K., Moller, N. and Tarp, F. 2014. 'The long-run impact of foreign aid in 36 African countries: insights from multivariate time series analysis', *Oxford Bulletin of Economics and Statistics,* 76(2): 153-184.

Kaldor, N, 1961. 'Capital Accumulation and Economic Growth'. In *The Theory of Capital*. Lutz, F.A. ed. International Economic Association. 172-222.

Kaldor, N. and Mirrlees, J.A. 1962. 'A new model of economic growth'. *The Review of Economic Studies*, 29(3): 174-192.

Kandiero, T. and Chitiga, M. 2006. Trade openness and foreign direct investment in Africa, *South African Journal of Economic and Management Sciences*, 9(3): 355-370.

Karras, G. 2002. 'Openness and growth: cross-sectional and time-series evidence', *Review of Accounting and Finance*, 1(3): 3-14.

Karras, G. 2003. 'Trade openness and economic growth: can we estimate the precise effect?', *Applied Econometrics and International Development*, 3(1): 7-25.

Keller, W. 2002. 'Trade and the transmission of technology', *Journal of Economic Growth*, 7(1): 5-24.

Kim, D-H., Lin, S-C. and Suen, Y-B. 2010. 'Dynamic effects of trade openness on financial development', *Economic Modelling*, 27(1): 254-261.

Kim, J.U. 2001. 'Empirics of economic growth and convergence in Asian Economies: a panel data approach', *Journal of Economic Development,* 26(2): 49-59.

Kingdom of Lesotho. 2004. *Poverty Reduction Strategy Paper*. Maseru: Ministry of Planning.

Kingdom of Lesotho. 2009. *Interim National Development Framework 2009/10 – 2010/11*. Maseru: Ministry of Planning,

Kingdom of Lesotho. 2012. *National Strategic Development Plan 2012/13 – 2016/17*. Maseru: Ministry of Planning.

Kingdom of Lesotho. 2000. *Vision 2020*. Maseru: Ministry of Planning.

Klasra, M.A. 2011. 'Foreign direct investment, trade openness and economic growth in Pakistan and Turkey: an investigation using bounds test', *Quality & Quantity*, 45(1): 223-231.

Kowalski, P., Lattimore, R., and Bottini, N. 2009. *South Africa's trade and growth*. OECD Trade Policy Working Paper No. 91, OECD: France.

Krueger, A.O. 1980. 'Trade policy as an input to development', *American Economic Review*, 70(2): 288-292.

Krueger, A.O. 1998. 'Why trade liberalisation is good for growth', *The Economic Journal*, 108(450): 1513-1522.

Krugman, P.R. 1979. 'Increasing returns, monopolistic competition, and international trade", *Journal of International Economics*, 9(4): 469-479.

Krugman, P.R. 1980. 'Scale economies, product differentiation and the pattern of trade', *American Economic Review*, 70(5): 950-959.

Krugman, P.R. 1981. 'Intra-industry specialization and the gains from trade', *Journal of Political Economy*, 89(5): 959-963.

Krugman, P.R. 1987. 'Is Free Trade Passé?', *Journal of Economic Perspectives*, 1(2): 131-144.

Krugman, P.R. 1994. 'Introduction to empirical studies of strategic trade policy'. In *Empirical Studies of Trade Policy.* Chicago: University of Chicago Press.

Kusi, N.K. 2002. *Trade Liberalisation and South Africa's Export Performance: proceedings of Trade and Industrial Policy Strategy Annual Forum, Muldersdrift.*

Kwon, R. 2013. Is Tariff Reduction a Viable Strategy for Growth?', *Journal of World-Systems Research*, 19(2): 241-262.

Laborde, D., Estrades, C. and Bouët, A. 2013. 'A global assessment of the economic effects of export taxes', *The World Economy*, 36(10): 1333-1354.

Lachman, D. 1974. 'Import restrictions and exchange rates', *South African Journal of Economics,* 42(1): 25-42.

Landau, D. 1983. 'Government expenditure and economic growth: a cross-country study', *Southern Economic Journal*, 49(3): 783-792.

Leamer, E. 1988. ‘Measures of openness’. In *Trade Policy Issues and Empirical Analysis.* Baldwin, R.E. ed. Chicago: University of Chicago Press. 145-204.

Leamer, E. 1995. The Heckscher-Ohlin model in theory and practice. Princeton Studies in International Finance 77. Princeton University, New Jersey.

Leith, J.C. 1997. ‘Growth and structural transformation in Botswana’. In *Aspects of the Botswana Economy*, Salkin, J.S., Mpabanga, D., Cowan, D., Selwe, J. and M Wright. Oxford Publishers: United Kingdom.

Lesotho National Development Corporation “LNDC”. 2000. *Annual Report 1999/2000*. Maseru, Lesotho National Development Corporation.

Lesotho National Development Corporation “LNDC”. 2001. *Annual Report 2000/2001*. Maseru, Lesotho National Development Corporation.

Lesotho National Development Corporation “LNDC”. 2002. *Annual Report 2001/2002*. Maseru, Lesotho National Development Corporation.

Lesotho National Development Corporation “LNDC”. 2010. *Annual Report 2009/2010*. Maseru, Lesotho National Development Corporation.

Lesotho Revenue Authority. 2004. *Annual Report*. Maseru, Lesotho Revenue Authority.

Lesotho United Nations Development Assistance. 2012. *Lesotho United Nations Development Assistance Plan 2013-2017*. Maseru, Lesotho United Nations Development Assistance.

Levine, R. and Renelt, D. 1992. ‘A sensitivity analysis of cross-country growth regressions’, *American Economic Review*, 82(4): 942-961.

López, R.A. 2005. ‘Trade and growth: reconciling the macroeconomic and microeconomic evidence’, *Journal of Economic Surveys*, 19(4): 623-648.

Lucas, R.E. 1988. ‘On the Mechanics of Economic Development’, *Journal of Monetary Economics*, 22: 3-42.

Lumenga-Neso, O., Olarreaga, M. and Schiff, M. 2005. ‘On indirect R&D spillovers’, *European Economic Review*, 49: 1785-1798.

Mabugu, R.M. 2005. *Fiscal policy design in South Africa: An intertemporal CGE model with perfect foresight*. Paper presented at the 4th PEP Research Network General Meeting. 13-17 June 2005. Colombo: Sri Lanka. Available from: < http://www.pep-net.org/fileadmin/medias/pdf/files_events/4th_colombo/Mabugu.pdf > [Accessed 31 July 2014]

Mabugu, R. and Chitiga, M. 2007. South African trade liberalisation and poverty in a dynamic microsimulation CGE model. *University of Pretoria Department of Economics Working Paper 2007-18.*

Malefane, M.R. and Odhiambo, N.M. 2016. 'The evolution of trade policy in Botswana', *Global Journal of Emerging Market Economies*, 8(1): 22-34.

Mankiw, N.G., Romer, D. and Weil, D.N. 1990. A contribution to the empirics of economic growth. *National Bureau of Economic Research Working Paper 3541.*

Mansori, K.S. 2003. 'The regional effects of trade liberalisation with increasing returns in transportation', *Journal of Regional Sciences*, 43(2): 249-268.

Matthews, J. 1983. *South Africa in the World Economy*. Johannesburg: McGraw-Hill Book Company.

Matume, G. 2006. *New barriers hinder African trade*. UN Africa Renewal Magazine. Available from: <http://www.un.org/africarenewal/magazine/january-2006/new-barriers-hinder-african-trade >
[Accessed 13 September July 2013]

Menyah, K., Nazlioglu, S. and Wolde-Rufael, Y. 2014. 'Financial development, trade openness and economic growth on African countries: new insights from a panel causality approach', *Economic Modelling*, 37: 386-394.

Mevel, S. and Karingi, S. 2012. *Deepening regional integration in Africa: A computable general equilibrium assessment of the establishment of a Continental Free Trade Area followed by a Continental Customs Union*. Selected paper for Presentation at the 7th African Economic Conference. 30 October - 2 November, 2012. Kigali: Rwanda.

Mendes, A.P.F., Bertella, M.A. and Texeira, R.F.A.P. 2014. 'Industrialisation in sub-Saharan Africa and import substitution policy', *Brazilian Journal of Political Economy*, 34(1): 120-138.

Minier, J. 2007. 'Nonlinearities and robustness in growth regressions', *The American Economic Review,* 97(2): 388-392.

Ministry of Development Planning. 2000. *Action Programme for Development of Lesotho 2001-2020.* Lesotho Ministry of Finance and Development Planning.

Ministry of Trade and Industry. 2009*. National trade policy for Botswana*. Gaborone: Republic of Botswana. Available from: <http://www.mti.gov.bw/webfm_send/182>
[Accessed 19 February 2015]

Ministry of Trade and Industry. 2011. *Economic diversification drive: medium to long-term strategy 2011-2016.* Available from: <http://www.mti.gov.bw/webfm_send/231>
[Accessed on 23/02/2015]

Ministry of Trade and Industry. 2014. Industrial development policy for Botswana. *Government Paper No. 3 of 2014.* Available from: <http://www.mti.gov.bw/webfm_send/309>
[Accessed 19 September 2015]

Musila, J.W. and Yiheyis, Z. 2015. 'The impact of trade openness on growth: the case of Kenya', *Journal of Policy Modelling*, 37: 342-354.

Myint, H. 1958. 'The classical theory of international trade and the underdeveloped countries', *The Economic Journal*, 68(270): 317-337.

Myint, H. 1977. 'Adam Smith's theory of international trade in the perspective of economic development', *Economica*, 44(175): 231-248.

News of the Uruguay Round of Multilateral Negotiations. 1993. *The Final Act of the Round*. Information and Media Relations Division of the GATT. Geneva.

Nitsch, V. 2000. 'Trade openness and urban concentration: new evidence', *Journal of Economic Integration*, 21(2): 340-362.

Nowak, M. 2005. 'The first ten years after apartheid: an overview of the South African economy'. In *Post-apartheid South Africa*. Nowak, M. and Ricci, L.A. Washington: International Monetary Fund.

Nyasha, S. and Odhiambo, N.M. 2015. 'The impact of banks and stock market development on economic growth in South Africa: an ARDL bounds testing approach', *Contemporary Economics*, 9(1): 93-108.

OECD. 2008. *African Economic Outlook: Botswana*. African Development Bank and OECD.

OECD and African Development Bank. 2002. *African Economic Outlook*. Paris: OECD.

Okuyan, H.A., Ozun, A. and Erbaykal, E. 2012. 'Trade openness and economic growth: further evidence without relying on data stationarity', *International Journal of Commerce and Management*, 22(1): 26-35.

Osabuohien, E.S.C. 2007. 'Trade openness and economic performance of ECOWAS members: reflections from Ghana and Nigeria', *African Journal of Business and Economic Research,* (2&3): 57-73.

Ozawa, T. 1992. 'Foreign direct investment and economic development', *Transnational Corporations*, 1(1): 27-54.

Perron, P. 1990. 'Testing for a unit root in a time series with a changing mean', *Journal of Business and Economic Statistics*, 8(2): 153-166.

Perron, P, 1997. 'Further evidence on breaking trend functions in macroeconomic variables', *Journal of Econometrics,* 80(2): 355-385.

Pesaran, M.H. and Shin, Y. 1995. Autoregressive distributed lag modelling approach to cointegration analysis. University of Cambridge Department of Applied Economics Working Paper Series 9514.

Pesaran, M.H., Shin, Y. and Smith, R.J. 1998. 'Bounds testing approaches to the analyses of level relationships', *Journal of Applied Econometrics*, 16: 289-326.

Pesaran, B, and Pesaran, M.H. 2009. *Time series econometrics using Microfit 5.0*. Oxford: Oxford University Press:

Petersson, L. 2001. 'Foreign dependency and high-speed growth in Lesotho'. In *From Crisis to Growth in Africa*. Lindahl, M. ed. New York: Routledge.

Phillips, P.C.B., and Perron, P. 1988. Testing for a unit root in time series regression. *Biomètrika*, 75(2): 335-346.

Pritchett, L. 1996. 'Measuring outward orientation in LDCs: can it be done?', *Journal of Development Economics*, 49: 307-335.

Pryor, F. L. 2007. 'Immiserising growth as seen by Bhagwati, Samuelson and others", *The Journal of Economic Education*, 38(2): 208-214.

Pryor, F.L. 1966. 'Economic growth and terms of trade', *Oxford Economic Papers*, 19(1): 45-57.

Rajan, R.G. and Zingales, L. 2003. 'The great reversal: the politics of financial development in the twentieth century', *Journal of Financial Economics*, 69: 5-50.

Ram, R. 1986. 'Government size and economic growth: a new framework and some evidence from cross section and time-series data', *The American Economic Review*, 76(1): 191-203.

Ram, R. 1999. 'Financial development and economic growth: additional evidence', *Journal of Development Studies*, 35: 164-174.

Rangasamy, L. 2009. Exports and Economic Growth: The case for South Africa. *Journal of International Development*, 21, 603-617.

Rao, B.B. and Rao, M. 2009. 'Openness and growth in Fiji: some time series evidence', *Applied Economics*, 41: 653-1662.

Republic of South Africa. 1912. *Report of the commission appointed to inquire into the conditions of trade and industries UG 10-1912*. Pretoria: Government Printer.

Republic of South Africa. 1925. *Customs tariff and Excise Duties Amendment Act No 36 of 1925, in Statutes of the Union of South Africa 1925*. Cape Town: Government Printer.

Republic of South Africa. 1958. *Report of the commission of enquiry into policy relating to the protection of industries UG No 36/1958.* Pretoria: Government Printer.

Republic of South Africa. 1970. *Board of Trade and Industry Report No 1355.* Pretoria: Government Printer.

Republic of South Africa. 1972. Report of *the commission of inquiry into export trade of the Republic of South Africa RP 69/1972*. Pretoria: Government Printer.

Republic of South Africa. 1979. *Economic planning development programme for the Republic of South Africa 1978-1987: Ninth economic development programme for the Republic of South Africa.* vol. 1. Economic Planning Branch. Office of the Prime Minister.

Republic of South Africa. 1985. *White Paper on Industrial Development Strategy in the Republic of South Africa WPG 85.* Pretoria: Government Printer.

Republic of South Africa. 1996. *Growth, Employment and Redistribution: A Macroeconomic Strategy (GEAR)*. Pretoria: Department of Finance. Available from: < http://www.info.gov.za/view/DownloadFileAction?id=70507> [Accessed 3 July 2013]

Republic of South Africa. 2006. *Accelerated and Shared Growth Initiative – South Africa (ASGISA): A Summary*. Pretoria: The Presidency of the Republic of South Africa

Ricci, L.A. 2005. 'South Africa's Real Exchange Rate Performance'. In *Post-apartheid South Africa*. Nowak, M. and Ricci, L.A. eds. Washington: International Monetary Fund.

Rivera-Batiz, L.A. and Romer, P.M. 1991. 'Economic integration and endogenous growth', The *Quarterly Journal of Economics,* 106(2): 531-555.

Rivera-Batiz, L.A. and Romer, P.M. 1991a. 'Economic integration and endogenous growth', *The Quarterly Journal of Economics*, May 1991, pp531-555.

Rivera-Batiz, L.A. and Romer, P.M. 1991b. 'International trade with endogenous technological change', *European Economic Review*, 35: 715-721.

Robson, P. 1987. *The economics of international integration.* 3rd ed. London: Allen and Unwin.

Rodrigues, M. 2010. 'Import substitution and economic growth', *Journal of Monetary Economics*, 57: 175-188.

Romer, P.M. 1986. 'Increasing returns and long-run growth', *Journal of Political Economy*, 94(5): 1002-1037.

Romer, P.M. 1990. 'Endogenous Technological Change', *The Journal of Political Economy*, 98(5): S71-S102.

Ruffin, R. 2002. 'David Ricardo's discovery of comparative advantage', *History of Political Economy*, 34(4): 727-748.

Sachs, J.D. and Warner, A.M. 1995. 'Economic reform and the process of global integration' *Brookings Papers on Economic Activity,* 1995(1): 1-118.

Sachs, J.D. and Warner, A.M. 1997a. 'Sources of slow growth in African economies', *Journal of African Economies*, 6(3): 335-376.

Sachs, J.D. and Warner, A.M. 1997b. 'Fundamental sources of long-run growth', *The American Economic Review*, 87(2): 184-188.

Sakyi, D. 2011. 'Trade openness, foreign aid and economic growth in post-liberalisation Ghana: an application of ARDL', *Journal of Economics and International Finance,* 3(3): 146-156.

Sakyi, D., Villarverde, J. and Maza, A. 2014. 'Trade openness, income levels and economic growth: the case of developing countries, 1970-2009', *The Journal of International Trade and Development*, pp1-22.

Salinas, G., Gueye, C. and Korbut, O. 2015. 'Impressive growth in Africa under peace and market reforms', *Journal of African Economies*, 24(1): 101-127.

Salvatore, D. and Hatcher, T. 1991. 'Inward-oriented and outward-oriented trade strategies', *The Journal of Development Studies*, 27(3): 7-25.

Samuelson, P.A. 1964. 'Theoretical notes on trade problems', *Review of Economics and Statistics*, 46: 145-154.

Samuelson, P.A. 2004. 'Where Ricardo and Mill rebut and confirm arguments of mainstream economists supporting globalization', *Journal of Economic Perspectives*, 18(3): 135-147.

Scheepers, C.F, 1969. 'The effect of import substitution on the volume and structure of South Africa's imports, 1926/27-1963/64', *Finance and Trade:* 258 - 271.

Schumacher, R. 2012. 'Adam Smith's theory of absolute advantage and the use of doxography in the history of economics', *Erasmus Journals of Philosophy and Economics*, 5(2): 54-80.

Segerstrom, P.S. 1990. 'Innovation, imitation, and economic growth', *Journal of Political Economy*, 99(4): 807-827.

Segerstrom, P.S., Anant, T.C.A. and Dinapoulos, E. 1990. 'A Schumpeterian model of the product life cycle', *The American Economic Review*, 80(5): 1077-1091.

Setipa, J. 3 October 2016. Why AGOA remains critical to Lesotho's development. *African Development Bank Industrialisation and Trade Corner*. [online]. Available from: <https://www.afdb.org/en/blogs/industrialisation-and-trade-corner/post/why-agoa-remains-critical-to-lesothos-development-16188/ > [Accessed 20 July 2018]

Singer, H.W. and Gray, P. 1988. 'Trade policy and growth of developing countries: some new data', *World Development*, 16(3): 395-403.

Singh, T. 2011. 'International trade and economic growth nexus in Australia: a robust evidence from time-series estimators', *The World Economy*, 1348-1394.

Skipton, C., Gwartney, J. and Lawson, R. 2001. 'Trade openness, income levels, and economic growth'. In *Economic Freedom of the World: 2001 Annual Report.* Gwartney, J. and Lawson, R. eds. Canada: The Fraser Institute.

Skipton, C, 2007. *Trade Openness, Investment, and Long-Run Economic Growth: proceedings of the 2007-'08 Southern Economic Association (SEA) meetings,* New Orleans, Louisiana. 18-21 November.

Solow, R.M. 1994. 'Perspectives on growth theory', *The Journal of Economic Perspectives,* 8(1): 45-54.

South African Customs Union (SACU). 1998a. *Trade Policy Review WT/TPR/S/36*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 1998b. *Trade Policy Review WT/TPR/G/36.* Windhoek: South African Customs Union.

South African Customs Union (SACU). 1998c. *Trade Policy Review WT/TPR/S/36.* Windhoek: South African Customs Union.

South African Customs Union (SACU). 1998d. *Trade Policy Review WT/TPR/G/36*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2002. *2002 Southern African Customs Union Agreement.* Windhoek: South African Customs Union.

South African Customs Union (SACU). 2003a. *Trade Policy Review WT/TPR/S/114*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2003b. *Trade Policy Review WT/TPR/G/114*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2003c. *Trade Policy Review WT/TPR/S/36*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2003d. *Trade Policy Review* WT/TPR/G/36. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2007. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2008. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2009. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2010a. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union(SACU). 2010b. *Merchandise Trade Statistics*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2011. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2012. *Annual Report*. Windhoek: South African Customs Union.

South African Customs Union (SACU). 2013. *Annual Report*. Windhoek: South African Customs Union.

Southern African Development Community (SADC). 1996. Protocol on Trade. Maseru: SADC. Available from: <http://www.sadcstan.co.za/Secure/downloads/protocol.pdf> [Accessed 8 July 2013]

Southern African Development Community (SADC). 2000. *Annual Report 2000-2001*. Gaborone: Southern African Development Community.

Southern African Development Community (SADC). 2002. *Regional Economic Review*. Southern African Economic Summit. Pretoria: National Treasury.

Southern African Development Community Secretariat (SADC). 2000. *Annual Report*. Gaborone: Southern African Development Community.

South African Reserve Bank (SARB). 1997. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 1998. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 1999. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 2000. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 2001. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 2003. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 2004. *Annual Economic Report*. Pretoria: South African Reserve Bank.

South African Reserve Bank (SARB). 2014. *Quarterly Economic Review*. Pretoria: South African Reserve Bank.

Spandau, A. 1979. 'Recent developments in the sanctions debate: foreign attacks and South African responses'. In *Sanctions against South Africa*. Geldenhuys, D. ed. Johannesburg: South African Institute of Foreign Affairs.

Spilimbergo, A., Londono, J.L. and Szekely, M. 1999. 'Income distribution, factor endowments, and trade openness', *Journal of Development Economics*, 59: 77-101.

Stiglitz, J.E. 1970. 'Factor price equalisation in a dynamic economy', *Journal of Political Economy*, 78(3): 456-488.

Swan, T. 1956. 'Economic growth and capital accumulation', *Economic Record*, 32: 334-361.

Tang, T.C. 2004. 'A reassessment of aggregate import demand function in the Asean-5: a cointegration analysis', *The International Trade Journal*, 18(3): 239-268.

Taylor, R J, 2007. *Technical Progress and Economic Growth: An Empirical Case Study of Malaysia*. United Kingdom: Edward Edgar Publishing Limited.

TDCA. 1999. *Agreement on Trade, Development and Cooperation between European Community and its Member States, of the one part, and the Republic of South Africa, of the other part.* Available from: <http://europa.eu/legislation_summaries/development/south_africa/r12201_en.htm > [Accessed 10 February 2012]

Todaro, M.P. and Smith, S.C. 2003. *Economic Development.* 8th ed. United Kingdom: Pearson Education Ltd.

Trade and Industrial Policy Strategies "TIPS". 2007. Intra-SADC Trade Performance Review: 2007. Policy document by Trade and Industrial Policy Strategies (TIPS) and Australian Government.

Ukpolo, V. 1994. 'Export composition and growth of selected low-income African countries: evidence from time-series data', *Applied Economics*, 26: 445-449.

United Nations. 2011. *International Trade Statistics Yearbook Volume I*. Geneva: United Nations.

UNCTAD. 2011. *The Agreement Everything But Arms (EBA) between the European Union and the Least Developed Countries (LDCs).* Available from: <http://www.unctad.info/en/Infocomm/Agricultural_Prodcuts/Banana/Economic-policies/The-Agreement-Everything-But-Arms/> [Accessed 1 December 2014]

UNCTAD. 2012a. *A practical guide to trade policy analysis*. Geneva: United Nations.

UNCTAD. 2012b. *Who is benefiting from trade liberalization in Lesotho: a gender perspective.* New York and Geneva: United Nations.

UNCTAD. 2013. *Intra-African trade: unlocking private sector dynamism*. Geneva: United Nations.

UNCTAD. 2014. *Economic development in Africa: catalysing investment for transformative growth in Africa*. New York and Geneva: United Nations.

United States Agency for International Aid and Development (USAID). 2008. *Exporters' Guide to Preferential Trade Arrangements Applicable to Lesotho*. United States Agency for International Aid and Development.

United States Department of Commerce. 2013. *US Trade with sub-Saharan Africa, January-December 2012*. United States Department of Commerce.

United States of America. 2000. *Trade and Development Act of 2000: the 106th Congress of the United States of America, Washington, D.C., 24 January.*

United Nations. 2016. *List of least developed nations*. Available from: <http://www.un.org/en/development/desa/policy/cdp/ldc/ldc_list.pdf >
[Accessed 23 March 2013]

United Nations Development Programme. 2011. Regional integration and human development: a pathway for Africa. Available from:
<http://www.unesco.org/library/PDF/RegIntegAndHumanDev_Africa_web.pdf >
[Accessed 15 May 2011]

Valentine, T. 2013. *Botswana's financial assistance policy and the indigenization of industrial employment.* New Jersey: Centre for Economic Research on Africa. Montclair State University. Available from:
<https://msuweb.montclair.edu/~lebelp/CERAFRM051Valentine1993.pdf>
[Accessed 23 February 2015]

Vamvakidis, A. 1998a. 'Regional integration and economic growth', *The World Bank Economic Review*, 12(2): 251-270.

Vamvakidis, A. 1998b. 'How robust is the growth-openness connection: historical evidence', *Journal of Economic Growth*, 7: 57-80.

Van Biljon, F.J. 1934. The Foreign Trade Policy of the Union of South Africa. MA Thesis, University of Pretoria, Pretoria.

Van den Heever, A. 1994a. 'Economic growth and trade reform – editorial comment', *South African Industry*. 1(2): 1-2.

Van den Heever, A. 1994b. 'The impact of GATT on the South African manufacturing sector". *South African Industry,* 1: 9-26.

Vickers, B. 2014. *South Africa's trade policy and strategy framework. presentation for international trade and economic development division.* Pretoria: Department of Trade and Industry. Available from:< http://www.thedti.gov.za/parliament/TPSF.pdf>
[Accessed 4 September 2014]

Vogiatzoglou, K. and Nguyen, P.N.T. 2016. 'Economic openness and economic growth: a cointegration analysis for Asean-5 countries', *The European Journal of Applied Economics*, 13(2): 10-20.

Wacziarg, R. 2001. 'Measuring the dynamic gains from trade', *The World Bank Economic Review,* 15: 393-429.

Wacziarg, R. and Welch, K.H. 2008. 'Trade liberalization and growth: new evidence', *The World Bank Review*: 1-45.

Walz, U. 1997. 'Growth and deeper regional integration in a three-country model', *Review of International Economics,* 5(4), 492-507.

Walz, U, 1999. *Dynamics* of Regional Integration. Heidelberg: Physica-Verlag.

Williams, B. R. 2013. *African Growth and Opportunity Act (AGOA): background and reauthorization.* Congressional Research Service Report R437173. Available from: <www.crs.gov> [Accessed 19 February 2014]

Wolde-Rufael, Y. 2010. 'Bounds test approach to cointegration and causality between nuclear energy consumption and economic growth in India', *Energy Policy*, 38(1): 52-58.

World Bank. 1975. *Lesotho: A Development Challenge*. Washington, DC: The World Bank:

World Bank. 2000. *African development indicators*. Available from: <www.worldbank.org>
[Accessed 1 March 2011]

World Bank. 2010. *Lesotho trade brief. World Trade Indicators 2009/10: Country Trade Briefs.* Washington, D.C: World Bank. Available from: <http://www.worldbank.org/wti >
[Accessed 24 November 2014]

World Bank. 2011. Kingdom of Lesotho: Third poverty reduction support grant and credit. *International Development Association Program Document Report 59486-LS*.

World Bank 2012. De-fragmenting Africa: deepening regional trade integration in goods and services. *World Bank Publication 68490.*

World Bank. 2014a. *South Africa Economic Update: Focus on Export Competitiveness*. Washington DC: The World Bank.

World Bank. 2014b. *World Development Indicators*. Washington DC: The World Bank.

World Bank. 2016. *World Development Indicators*. Washington DC: The World Bank.

World Bank. 2015. *Global Economic Prospects.* Washington DC: The World Bank.

World Economic Forum. 1998. The Africa Competitiveness Report. Geneva: World Economic Forum.

World Trade Organisation (WTO). 1994. *Uruguay Round Protocol GATT*. Available from: <http://www.wto.org/english/docs_e/legal_e/ursum_ehtm#Uruguay>
[Accessed 26 September 2013]

World Trade Organisation (WTO). 1998a. *Trade Policy Review: Kingdom of Lesotho WT/TPR/S/36*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998b. *Trade Policy Review: Kingdom of Lesotho WT/TPR/G/36*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998c. *Trade Policy Review: Republic of South Africa WT/TPR/S/34.* Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998d. *Trade Policy Review: Botswana WT/TPR/S/35*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998e. *Trade Policy Review: Botswana WT/TPR/G/35*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998f. *Trade Policy Review: Botswana WT/TPR/S/35.* Geneva: World Trade Organisation.

World Trade Organisation (WTO). 1998g. *Trade Policy Review: Botswana WT/TPR/G/35.* Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2003a. *Trade Policy Review: Southern African Customs Union Minutes of Meeting, Addendum WT/TPR/M/114/Add.1*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2003b. *Trade Policy Review: Southern African Customs Union. Minutes of Meeting WT/TPR/M/114*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2003c. *Trade Policy Review: Southern African Customs Union WT/TPR/G/114*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2003d. *Trade Policy Review: Southern African Customs Union WT/TPR/S/114.* Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2009. *Trade Policy Review: Southern African Customs Union*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2003. *Trade Policy Review: Southern African Customs Union WT/TPR/S/114.* Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2009. *Trade Policy Review: South African Customs Union WT/TRP/S/222/ZAF*. Geneva: World Trade Organisation.

World Trade Organisation (WTO). 2014. *Annual Report*. Geneva: World Trade Organisation.

Yanikkaya, H. 2003. 'Trade openness and economic growth: a cross-country empirical investigation', *Journal of Development Economics*, 72: 57-89.

Young, A. 1991. 'Learning by doing and the dynamic effects of international trade', *The Quarterly Journal of Economics,* 106: 369-405.

Zahonogo, P. 2017. 'Trade and economic growth in developing countries: evidence from sub-Saharan Africa', *Journal of African Trade*, 3: 41–56.

Zhang, X-B. 2014. 'Optimal strategic oil stockpiling and import tariffs: the case of China', *Energy Economics*, 45: 463-474.

APPENDIX

A.1 Selected indicators: 2014

	Arable land (% of land area)	Exports of goods and services (% of GDP)	Exports of goods and services (annual % growth)	Imports of goods and services (% of GDP)	Imports of goods and services (annual % growth)	Trade (% of GDP)	Inflation, consumer prices (annual %)	Gross fixed capital formation (% of GDP)	Broad money (% of GDP)
South Africa	10.304	31.206	3.224	32.946	-0.514	64.151	6.067	20.601	70.827
Lesotho	8.969	34.990	-6.975	86.889	-1.049	121.879	5.340	27.936	32.910
Botswana	0.704	60.830	7.794	53.942	-0.522	114.773	4.403	30.461	38.283

Compiled from World Bank (2016). Note: At the time of writing, data coverage was limited to 2014 since no data on arable land was available beyond this point.

A.2 Trends in economic growth: 2001 - 2015

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sub-Saharan Africa	3.9	3.0	4.9	11.7	5.6	7.1	7.1	5.4	2.9	5.4	4.3	3.8	4.8	4.6	3.0
Botswana	0.3	6.1	4.6	2.7	4.6	8.0	8.7	3.9	-7.8	8.6	6.2	4.3	5.9	4.1	-1.7
Lesotho	3.4	-0.2	4.0	1.6	2.0	3.5	3.9	4.8	2.4	6.8	2.9	3.7	3.2	2.6	5.6
South Africa	2.7	3.7	2.9	4.6	5.3	5.6	5.4	3.2	-1.5	3.0	3.3	2.2	2.5	1.7	1.3

Compiled from World Bank National Accounts Data (online)

A.3 World Bank definitions

Arable land (% of land area)

Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Exports of goods and services (% of GDP)

Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Exports of goods and services (annual % growth)

Annual growth rate of exports of goods and services based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Imports of goods and services (% of GDP)

Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Imports of goods and services (annual % growth)

Annual growth rate of imports of goods and services based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other

services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Trade (% of GDP)
Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.

Inflation, consumer prices (annual %)

Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

Gross fixed capital formation (% of GDP)
Gross fixed capital formation (formerly gross domestic fixed investment) includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.

Broad money "M2" (% of GDP)
Broad money (IFS line 35L..ZK) is the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other securities such as certificates of deposit and commercial paper.